OFFICIAL: BRITAIN'S BEST-SELLING COMMODORE 64 MAGAZINE!

12 EDOS GAMES POWERTESTED

COMMODORE FORMAT

Still waving the flag for the Commodore 64!

ISSUE 43 ● £2.95 (What a barg) ● APRIL 1994

2 READER GAMES

PLUS

SIDE 2
43
tape
SIDE 1
43
tape

2 TAPES IN 1

TECHIE TIPS
& SHREWD
SOFTWARE
COLLECTION

BE A GOOD SPORT!

From the pavilion to the grandstand, we reveal everything you ever wanted to know about C64 sports games. Six pages of sport starts on page 17...

Capricorn: Mars is so dominant in Pluto that your tape gets crushed by planetary influence. Speak to your Newsie now. Lucky car: Mini. Lucky number: D

Tape to disk
SMART!
Turn to p.7.

THE ORIGINAL, THE BEST AND NOW THE ONLY CF!
Commodore Force readers turn to page 8

Future
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I miss them already. Not. Good riddance to the lot of them I say.
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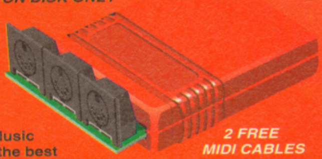

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Welcome to another fantablious issue of the world

CONT

CF crew

FROM THE GRANDSTAND

What with the weather improving, the trees budding and flowers a-peeking, we 've got all sporty in the CF office. In fact, so taken were we by Olympian pursuits that we've dedicated this issue to sport in all its shapes and forms. Now certain portions of the team needed a bit of geeing along when it came to exercise but when Hutch mentioned that pay review time was just around the corner, the team became all compliant. Great wimps aren't they.

HUTCH

Hutch likes his sports to be fairly unenergetic. Most saturdays you can find him down at the golf club teeing, driving, chipping and putting his way around the course. To date he's only killed three people with his off-kilter shots. The best thing about golf, he says, is the jolly old 19th hole.

OLLIE

When it comes to sports CF's art editor likes nothing better than a footy match down the rec. He is something of a whizz in goal and has been known to save as many as 20 shots in one match. With one hand.

SIMON FORRESTER

Hairy took it all a bit seriously and invested in a rather dubious looking leotard. Proclaiming himself to be 'King of the Ring'. He stood on his desk and leapt on anybody silly enough to wander through the CF office. What a nutter.

GREETINGS

Hello one and all and welcome to another belting edition of the world's favourite Commdore 64 magazine.

The most obvious bit of news this month is that Commodore Force has gone to the wall. Impact the company that published it have closed down five of their titles. I'd tell you that I miss them but why lie. They never had a good idea of their own – deciding instead to simply copy what everyone else was doing. Goodbye and good riddance.

The other fabulous bit of news is about a new game that dropped onto my desk this week. It has come all the way from Finlandand has taken the programmer some two years to create. The game's a kind of Dynablaster look-alike in which you zip around a maze dropping bombs. It offers two player action and is one hell of a lot of fun. You can find exclusive screenshots over on page 8. We'll be reviewing the game in full next month.

So what else has been happening? Well, for starters, my Beg, Borrow, Steal feature seems to have stirred up a few feelings. Mighty Brain's replied to one reader's letter who appears to be very confused about consoles and console games. Still TMB puts him straight on a few points.

Anyway, as you probably guessed from the front cover of this issue – the theme of the month is sport. We've been digging out all the old sports sims and putting them through their paces. You can find an A-Z of sport on page 22 and a sports retro review on page 25.

Right, I'll leave you to it now. Enjoy the issue and if you think it's really brilliant then send us record tokens and beer, because we like that kind of stuff.

Hutch

8 SNIPPETS

Big news this month – it could change the way you use your C64 for ever. You might end up using it without the help of an old friend (or should that be acquaintance?).

9 CHARTS

If you want to find out about the best and the worst games available this month, ask The Mighty Brain. You might even get a little blast from the past. Then again you might just get a blast from his cerebral botty. Yuckeroonie.

10 THE MIGHTY BRAIN

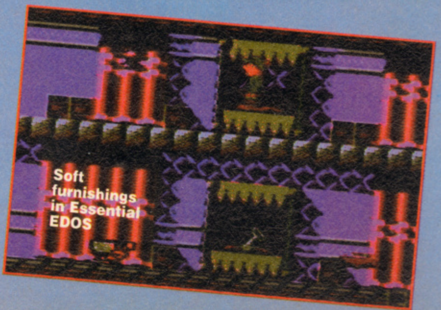
People can spend their lives in search of answers to questions that plague their souls, humanity, and their C64s. If only they'd have known that a quick conflab with the computer industry's most intelligent mushy grey blob could have answered anything they'd have wanted.

13 CAPTAIN STEM'S DATAFILE

Making his debut in the pages of CF, Captain Stem has battled his way through the centuries of history, engaging in battle with Napoleon, playful badinage with Shakespeare, and a good game of cribbage with Queen Victoria to bring you the very best in gaming expertise.

14 ESSENTIAL EDOS

There's more than one way to buy software. We take a look at a few more games that you could get your hands on for very little at all.



Soft furnishings in Essential EDOS

16 BOOK REVIEWS

How do you think the CF team get so knowledgeable on the C64? Some of us are just completely brilliant C64 gods, but you'll need to learn your stuff – we take a look at a few books that might help you on the way to programming success.

18 PD FORMAT

If you're so cheap that you thought the EDOS stuff was out of your price range, we're trawling the world of PD software that you can't possibly not afford.

20 SPORTS ALMANAC

In case you hadn't noticed, the big theme for this month is sport and the various sports games available to you. By the time we've finished with you, you'll know everything there is to know about getting sporty on your C64. So to speak.

22 A-Z OF SPORT

It's the definitive sporting dictionary, you know – the complete guide to the sporting alphabet of the C64. From athletics to zebra bating, it's all in here, extensively compiled by the few people on the team who actually knew their alphabets.

24 GREAT SPORTING FAILURES

There are definitely a lot of incredibly good sports games around out there. Having said that, there are also some dismally bad ones to cancel them out. For a bit of balance, take a look at some of the absolute worst sports games of all time.

25

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ENTS

he world's best selling Commodore magazine...

25 A TOUCH OF CLASS

This month in our regular blast from the past, we take a look at one of the better meathead-with-a-mission games, and a quite scarily good sports game, the programmers for both of which have now grown up, married, had children, grown old, died, and left a legacy of good games behind them. That's how darned old these games are.

26 MAINTAINING YOUR C64

You don't have to be a technical expert to keep your computer up and running the way you want it. In fact, most problems can be cured with the aid of a copy of CF, and your emergency repair kit.

28 SECRET OF SEUCKCESS

We receive hundreds of SEUCK games each month for the covertape, but only a few actually make it all the way to the covertape? Why? Well, most of them are nob. If you're planning to write your own SEUCK game, you might want to know how to make it shine a little brighter than the rest.

29 TECHIE TIPS

If we were going to talk techie to you we'd only hire the best to do it for us. And by a spooky coincidence we do and have. Jason Finch pulls out a cartload of technical looking books along with a few odd boxes with flashy lights and too many wires to answer your most taxing technical questions (even though we haven't got a clue what he's on about most of the time).

32 THE SURGERY

This month Dr Parquet's assistant goes off on a tangent that's not only completely unexplored, but's also completely incomprehensible. Still, you all say you know what he's talking about, so we'll just nod our heads and say 'Mmm' a lot.

33 THE BASICS

BASIC stands for Beginners All-Purpose Symbolic Instruction Code. Well, it's definitely simple, you can use it for just about anything, it's meant a hell of a lot in our lives, it is based on instructions, so maybe it's about time you started cracking the code.

34 DEAD EASY SCROLL

Everyone's been stuck at a party being talked at by some anorak who's heavily into scrolling routines. Well, now's your chance to strike back with an eight-way scrolling system of your very own. Paul Black is your host for scrollerville.

46 BUYARAMA

If you can sell it, you can buy it – prams, bedside cabinets, fishing rods, beaten up cars, stamp collections, or at stretch, something nice for your lovely computer.

47 BACK ISSUES

If your complete set of CFs is missing a few numbers, you might just be able to find what you want within…

50 NEXT MONTH

Just what have we got lined up for you lovely people next month? What indeed…

95 SUB-SPACE ERROR

If when you get to the back of your issue you find a strange portal, please ignore it. Captain Stem uses this to access the pan-dimensional grid. Only he dropped it into one of the issues. If you've got it don't venture inside…

GAMEBUSTERS

You dastardly lot – you could only have bought that game about two hours ago, and you're on the search for a complete solution already! I have no respect for you, you spineless slime, you.

36 GAMEBUSTERS

The crowd goes wild as another month's worth of game cheats slides into the water, the smashed champagne bottle still hanging from its bow.

37 MAYHEM HAPPY PIPES

It seems to take forever, doesn't it? Well, we've finally got around to the solution on how to complete Happy Pipeland.

40 NOBBY THE AARDVARK PT 5

I pity aardvarks – eating ants can't be much fun. If you want to get Nobby out of his predicament and down to Mrs Miggins' Pie Shop for a slap up binge, here's how to do it.

42 FUTURE KNIGHT

We gave it away on a covertape, and everybody said how difficult it was. Well, thanks to your moaning, we've got the complete guide.

44 LISTOMANIA

The ultimate in game cheat listings.

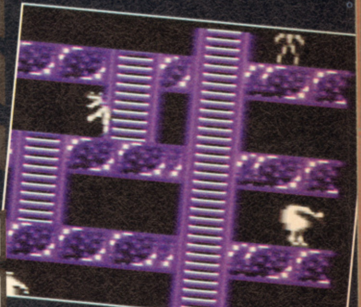
POWERPACK PAGES

There's a slightly different powerpack this month – it contains some of the very best reader games ever.

COMMODORE FORMAT
TECHIE TIPS
2 READER GAMES
POWER PACK
SHREWD SOFTWARE COLLECTION

SHREWD SOFTWARE COLLECTION

Please forgive the slight alteration of the programming team's name, but we didn't want anything even vaguely legal to spoil your enjoyment of yet another three excellent games from the authors who provided a lot of the entertainment last month. So, before you do anything else, check out Pud & Dawsey, Chaos Road, and Skulz, for some of the best reader action you'll have seen in a long time.



PENSNETT PD DEMO

Straight from one of the largest C64 libraries around, a complete game!

SUB BURNER

An excellent shoot-em-up from a skillful SEUCKer, David Dewar.

More stonking games to amaze and amuse you. This month, five completely original zappers...

POWER PACK 43

COMMODORE FORMAT
TECHIE TIPS
2
READER GAMES
POWER PACK
SHREWD SOFTWARE COLLECTION

CHAOS ROAD

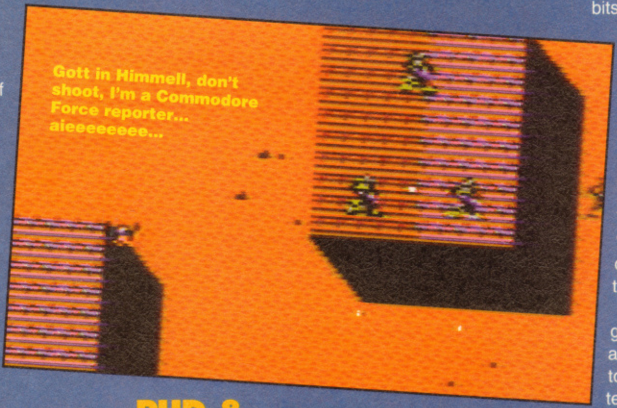
FULL GAME

There's nothing worse than following the orders of a superior. People who sit behind desks or have the power to order you about don't so much take it for granted, they just become, well, detached. The very fact that the link between those in power and reality is, at the very best, tenuous, has led to quite a few dramatic incidents in world history. Indeed, British politics over the past decade or so have been so farcical that Sid James would feel a little outclassed.

The problem isn't one, as everyone would otherwise believe, of red tape, more of the fact that if a superior asks you to do something and you let them know in no uncertain terms that they're making an impossible request, the odds are they'll come up with a response roughly along the lines of "do it anyway". Some just manage to clear themselves of all responsibility and indeed workload with phrases such as "don't bring me problems, bring me answers", but this particular case doesn't involve anyone that bad.

Let's do a little scene setting, then, with an elite army. This isn't so much an army as an ARMY, and they know it. They have several troops of crack marksmen, foot soldiers, gunners, tanks drivers, marines, SEALs, and just about every other homicidal maniac you can breed in a barrack. They're the enemy. In the true style of the empire, your army is equally as talented, in other areas. So, when war broke out, they put their talents to good use, and came up with a raw, throbbing powerhouse of excuses as to why they should be at home in bed with a good book. This leaves you. Oh, and the enemy nation. I think you can guess the rest.

If you feel like making your way across the treacherous terrain you can feel free, but don't expect reinforcements to come along and pick up the several thousand pieces you'll get blown into. I think you'd just better concentrate on surviving for now, so getting the hell out of there is probably in your best interests. That's why you don't have to kill anybody, just run.



Gott in Himmell, don't shoot, I'm a Commodore Force reporter... aieeeeeeee...

PUD & DAWSEY

FULL GAME

As soon as you get as far a school, you start making the sort of friends that you'll probably still pop 'round and see when you're forty. What the poets, films, and sentimental old fools don't tell you is that while you're sipping their tea and talking about good old times, you'll hate every waking second of it, and secretly loathe the fact you had that second of weakness in which you talked to the school scumbag in the first place.

If you're sitting there nodding your head in sympathy, you'll probably also appreciate Pud's dilemma. He had one of those friends that was always getting lost, into trouble, beaten up, or generally just dumped on by life, except for one odd fact – it always misfires on you. We're talking about the guy who only gets an exploding drink can when he opens it in your bedroom, or only trips over when he's carrying your computer. I'm talking about the guy who'll lose his wallet on exactly the same day he had the cash together to pay you back that tenner he owes you.

If you're a visiting old friends and have just picked up this magazine out of desperation and boredom, I pity you.

Anyway, Dawsey has just managed to get himself kidnapped, and it's up to you, Pud, to rescue him. In true irritating friend style he's not actually harmed, but his kidnappers have set up the world's most maniacally dangerous defence system to stop you rescuing the guy. That's right – he sits around doing nothing while you risk life, limb, and various squashy bits to do the right thing and rescue him.

Thankfully, you have a gun, but you'd better hope you're good with it – you'll need to be. So if you've packed your woolly socks and thermos of tea, you'd better get out there and start your quest. I'd wish you luck, but it wouldn't do any good.

FAME AND GLORY

Yes, both of these rare commodities can be yours. "But how?" I hear you shriek in unison. Well, it's quite simple – send us your programs and if they're any cop, we'll bung them on the covertape.

The kind of stuff we're looking for are original games (namely no Tetris copies) and also utilities and demos. Before you send your masterpiece off to us, have an impartial friend apraise your work, telling them to check for ease of use, stability (it doesn't crash all the time) and general loveliness. when you're happy that they thinks it's a great game, send it off to us here at Simon Forrestor, Commodore Format, 30 Monmouth Street, Bath, Avon, BA1 2BW. Hurrah!

QUICKSTART INFO

Side One • Tape Count 000 • Joystick port 2

UP	Jump.
DOWN	Crouch.
LEFT	Run left.
RIGHT	Run right.
FIRE	Er... Well... Fire, really.

Other Info........To pause press RUN/STOP.

NO LOAD ZONE

SIDE 2
CF
POWERPACK
tape

If you're having a hard time loading this month's powerpack then plonk the duff tape in a jiffy bag, slip in an SAE, seal it up and send it to: CF 43 Tape Replacement,
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Harcourt Halesfield 14, Telford, Shropshire.
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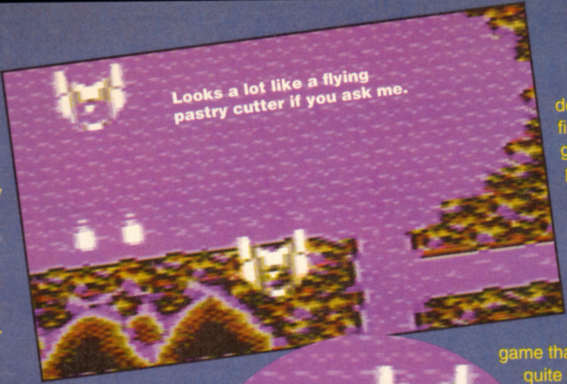
SKULZ



Looks a lot like a flying pastry cutter if you ask me.

It's not widely known that, though we manage to carry them round in our heads for our entire lives without really noticing, skulls possess some very odd powers indeed. One such power is that of thought. It's quite funny really, to think that, for the best part of the last century, the medical profession has spent a great deal of time, money, and manpower cutting through skulls and trying to work out which part of the brain does what in triggering human thought.

The problems comes when people die. You see, though you may be sitting there panicking because of the length of time it takes a skull to decay (it's not nice being trapped underground for several years), the skull actually dies with the body, validating brain death. Unless, of course, you're on the planet of Drygar (stylin' planet name, don't you think), on which living tissue doesn't decay. Once your body dies, as your brain has to decay for at least five seconds before brain death actually takes place, there are thousands of lost, tortured, and generally unhappy souls down there on the planet, with only you to help them out (empty place).

So it's your mission to fly over the planet's surface, collecting these skulls, in order to take them home and shatter them, actually letting these poor sods, some of which have been sitting there for millions of years, to die and rest in peace.

That's a bit of a tacky plot, isn't it? Sorry n'all, but I couldn't think of anything better to write about for this game, and just saying that you can use up, down, left, right, and fire, isn't exactly going to fill these pages, keep either you or Hutch happy, or get me paid.

I could give it a try, though.

This is a bog-standard shoot-em-up game that happens to be quite good as well. Your mission is to fly forward collecting skulls, and shooting all the people who'd much rather you weren't there, or weren't alive – either would do. You've got three lives, and a score. Good.

Do not adjust your magazine, this is in fact a mono shot.

FULL GAME

SUB BURNER

And today's lesson in magazine writing is how to create a couple of hundred words of instructions and plot where a sentence would have served the same purpose. First, you'll have to come up with an introduction.

Lionel the pilot was not having fun. He was most definitely not having fun. His girlfriend's been captured, and they were supposed to be going to the cinema today. Instead, he's been captured.

There. That's a nice start, isn't it? Now all we need is a twist:

The thing with girlfriends, as any bloke will tell you, is that they're hassle. Yes they are. I'm not anti-women or anything, but they really are a hell of a lot of hassle, and life is a hell of a lot easier without them. This is one of the reasons why Lionel was content sit back and enjoy the easy life with a can and a good film.

Nearly content. There was that thing about male pride to deal with first.

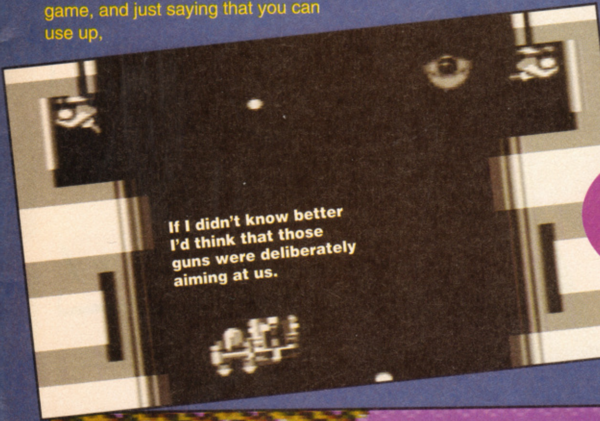
So here's the hook that lets me carry on explaining exactly what you have to do:

Male pride is an odd thing. If his girlfriend had been psycho bitch from hell and back, he'd still have to punch out the evil villain who stole her from him and rescue her, despite the fact that she really was having quite a nice time of it, and the villain did the washing up more often. So Lionel decided to find 'im, and 'it 'im.

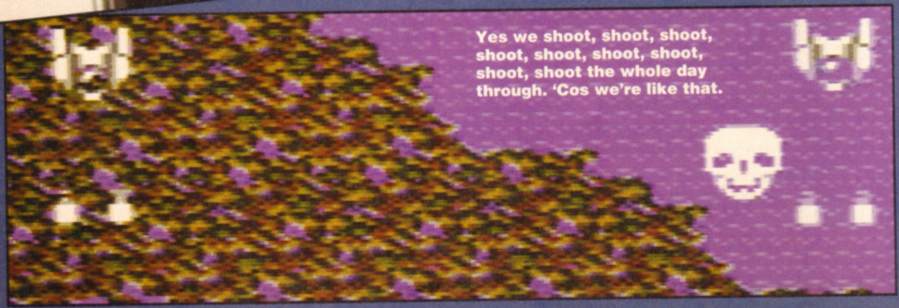
That'll do quite nicely. All we need now is the control system, then we can sit back and relax:

So Lionel climbed into the first of his three ships, and took off, flying through the metallic tunnels of the captor's lair, battling against the defensive mechanisms and enemy ships using left, right, up, down, and fire, and trying to avoid bumping into his girlfriend if he possibly can.

FULL GAME



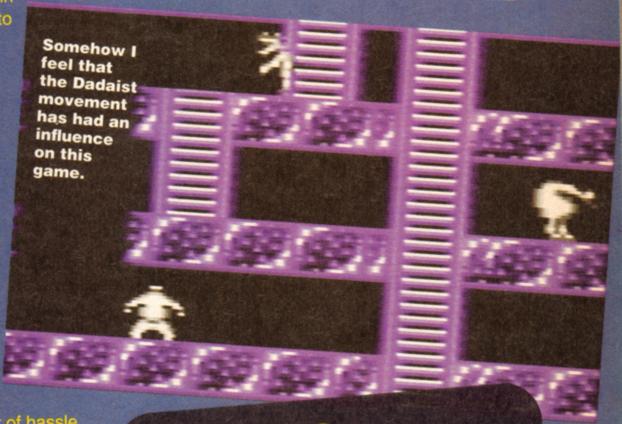
If I didn't know better I'd think that those guns were deliberately aiming at us.



Yes we shoot, shoot, shoot, shoot, shoot, shoot, shoot, shoot the whole day through. 'Cos we're like that.

NEXT MUNF

We're lining up some stonking software. We're trying to balance the tape between your more serious software and the games and demos – that way every stays happy. If there are any games or utils that you think we should include on the tape then drop Simon a line and tell him which ones you think are worthy of our precious tape space. we're looking into getting Head over Heels at the moment., so watch this space pop pickers. Right I'm off to play Chaos Road. Till next month.



Somehow I feel that the Dadaist movement has had an influence on this game.

TECHIE TIPS

That's right – the Techie Tips programs have finally made it onto this month's covertape, so any that you've missed will be here in all their glory. It's the Techie Tips stuff, yes, namely his collection of problem solving lovelies from the pages of Dr Finch's Techie Tips.

Tape to disk

If you're lucky enough to own a disk drive and want to use it as well as admire it, then you can get hold of this month's Powerpack on disk. Simply cut out the token on the tape inlay card, write your name and full address on a piece of paper, pop 'em in an envelope with a cheque or postal order, made out to Ablex Audio Video, for £1.50 (to cover duplication costs) and send it to:

CF 43 Tape To Disk
Ablex Audio Video Ltd.
Harcourt Halesfield 14
Telford
Shrops. TF7 4QD.

SNIPPETS

What's happening in the land of the C64? Well, just for a change we've got some good news...

FINNISH A LEVEL?

Though game previews normally get a whole page, a package has just (we mean within the last half hour at the time of writing) arrived on Hutch's desk, namely Penguin Tower – Dinsdale And Ruby's Crusade. This would have been fine, were it not for the fact that the time of writing is also the 'oh, hurry up, we need to get the magazine to the printers' time, and Snippets seems to be just about the only available space.

The game's based around the adventures of Dinsdale and Ruby, two parrots who want to restore their world to the nice, warm, and sunny place it once was, before the penguins got to it, and turned it into one huge snowball. They can achieve this by climbing the penguin tower and destroying the Wand of Cold, which will restore their land to its former beauty.

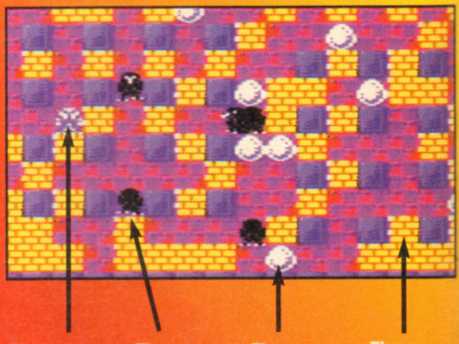
One of the penguins has a sly wee-wee.

Enough with the plots, already. You're dropped onto a screen with various penguin wandering round, all of whom you'll have to kill to get to the next level. Penguin killing is especioally easy considering you've got a massive pocket full of bombs that you can drop anywhere on the screen to help (they also blow up scenery, letting you work your way to different parts of the screen). To help you even further in your mission against the penguins (hardly menacing animals, are they?), you can find various power ups allowing you to drop more than one bomb at a time, run faster, or drop bombs with more gunpowder, giving them a longer blast range.

The hottest game to arrive on the 64 for ages.

Though this is a preview and, strictly speaking, I'm not supposed to give any evaluation, but it really is quite exceptionally addictive, and Simon's really looking forward to writing the full review next month (not unless I get to it first – Hutch).

Can you wait that long? Well, here's a few snaps of the game to tie you over 'til then. *(Editor's note – this really is a quite exceptionally excellent game which we'll be giving a humungous review to next month. Watch this space – Hutch).*


That's you that is. The chap in the blue.
These penguins arethe enemy.
These eggs hatch into penguins
These bricks reveal power-ups

A USER GROUP, NO LESS

We recieved a press release, you see:

The Independent Commodore Products User Group is offering a special cut priuce subscription for members joining for the eight months from 1st May to 31st December 1994 of only £15.50 (including £1 share) for UK and BFPO members. The rate for Europe (including Eire) and Overseas Surface Mail is £19.50, and the overseas Air Mail rate for this special offer is £26.50.

This special spring offer includes four issues of the ICPUG journal, free PD software for the Amiga, all other Commodore Computers, plus an extensive PD library for the PC. There are technical help lines and discounts as well. The ICPUG journal has articles covering the Amiga, PCs, and the earlier Commodore machines. The "For Sale and Wanted" column is a means of acquiring items which are now out of production and the "Readers Write" section is always popular.

ICPUG is non-profit making and is organised by volunteers. It has been in existence for over sixteen years. Details from John Bickerstaff, 45 Brookscroft, Linton Glade, Croydon, CR0 9NA. Tel: 081 651 5436. Fax:081 651 3428.

Loads of PD software can be yours with ICPUG. Wow-wee.

A TEAR IN OUR EYE

It's with a distinct snuffle of runny mucus that we bring you news of the distressing demise of our long-standing rival, *Commodore Force*. We'd just like to say it's been a pleasure working opposite them, but it hasn't. Seriously though, we are sad to see them go, as it does close another chapter in the long history of the C64, and it means we've got no real competition to measure ourselves by. We had a sort of office whip round to try and raise enough money to buy the mag (an idea inspired from the days of YS), but we only managed £3.83, and Impact, the publishers of Force, wanted at least £4.95. That's it, then – it's dead.

SNIPPETS QUIZ

It's test time again. If you think you've been paying attention so far, then answer these questions and send them to the addresss below. First out of the hat on the day we write the next news page wins a free game.

1) Who wrote the Dead Easy Scrolls feature which starts on page 34?
2) What's the name of the first book we reviewed?
3) What's at numbers 2, 7 and 8 in the Commodore Format charts?
4) What's John Rowlands favourite car?
5) What sports game gets the retro review treatment? Where does it get its name from

Send your answers to Snips Quiz, Commodore Format, 30 Monmouth Street, Bath, Avon. BA1 2BW.

CHARTS

TOP TEN

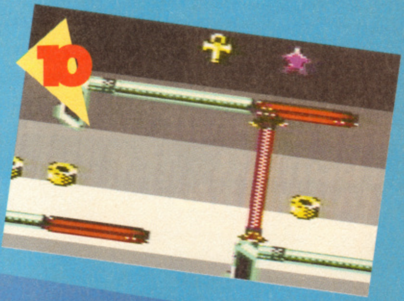
1	**STREET FIGHTER 2**	KIXX £5.99	●
2	**WWF RAMPAGE**	HIT SQUAD £3.99	●
3	**JACK NICKLAUS**	HIT SQUAD £3.99	N
4	**STREET FIGHTER**	KIXX £3.99	N
5	**FINAL FIGHT**	KIXX £3.99	N
6	**THE SIMPSONS**	HIT SQUAD £3.99	N
7	**RAINBOW ISLANDS**	HIT SQUAD £3.99	●
8	**CREATURES**	KIXX £3.99	▼
9	**TEST DRIVE 2**	HIT SQUAD £3.99	N
10	**JP2 - ROBOCOD**	KIXX £3.99	▼

PLAYER 1
ZANGIEF
PLAYER
DHALSIM

1

2

8



10

CHART FACTS

What have you lot been buying? It's pretty obvious that the slowdown in the industry hasn't stopped you all from rushing out and continuing to buy Street Fighter 2, has it now? Even odder is the comeback of WWF, a game that we all thought had gone for good. It's pretty obvious, considering how crap it is, that this is a game selling purely on its name, as no-one could ever really want it for the gameplay, could they?

THAT WAS THE MONTH THAT WAS: APRIL 1991

1	*Teenage Turtles*	(Mirror)
2	*Dizzy Collection*	(Codemasters)
3	*Creatures*	(Thalamus)
4	*Hollywood Collection*	(Ocean)
5	*Total Recall*	(Ocean)
6	*Golden Axe*	(Virgin)
7	*Wheels Of Fire*	(Domark)
8	*Gazza 2*	(Ocean)
9	*Big Box*	(Beau Jolly)
10	*Kick Off 2*	(Anco)

10 REASONS WE WON'T MISS *COMMODORE FORCE*

- They've gotten into the habit of just regurgitating game cheats.
- They haven't done anything remotely original or even vaguely interesting in the last year.
- They're crap.
- Their covertapes were abysmal cack, churning up third-rate games month after month and trying to pass them off as 'entertaining'.
- They're really very crap.
- Somehow they think they can charge you £3.50 to read that rag.
- Do you hear what I'm saying? Damn crap.
- They completely ripped off Format's design and characters.
- We'll miss them like we'll miss Hitler, Thatcher and Maxwell.
- They're crap.

The Mighty Brain has seen stars implode and galaxies dissolve in on themselves. If you'd like to know what that looks like then write to him at TMB, Commodore Format, 30 Monmouth Street, Bath, Avon, BA1 2BW.

THE MIGHTY BRAIN

STAR GROUCH

I am writing with concern for all the subscribers in relation to the phone-in competition in CF37. I was hoping to enter this competition on the 27th of October but I had not received the magazine due to the Royal Mail. I myself have only been subscribing to the magazine since issue 37 but have been collecting the magazine since issue 15 from the local newspaper and magazine vendor on the day that the shop receives it from their stockist.

So by the powers of deduction I cannot enter the competition until the 2nd of November, four whole working days after the phone lines opened. In this space of time a normal competition phone line receives around 40,000 callers but this cannot be true for this competition because most people would call on the Thursday morning as instructed in issue 37. Anyway, there appears to be little hope for subscribers to win such competitions in the future unless either the GPO bucked their ideas up or the method of entry to such competitions is changed.

Continuing the above concern, I rang the reader's hotline on Monday 24th of October only to be greeted by a woman saying "Hello, Future Publishing". Well, that's helpful, isn't it. I even have to explain the nature of the call to here and to the well-spoken lady that the woman connected me to.

I am now writing three days later having just come back from the telephone box having just been told that I was too late in entering the above competition. On reading your section in issue 38 I have found out that it takes three months for the magazine to get to New Zealand, what from of mail transfer are you using exactly Tortoise Mail or Group 4?

Onto other matters. Firstly, congratulations to Clur or should it be commiserations? Secondly, do you know what happened to the game Aliens by Alternative because I cannot get hold of it (readers turn to Uncle Dave's Buyarama).

Name and address withheld because we're about to humiliate him.

I have a question for you. Were you born that way? Firstly, let's look at why the team decide to run competitions like this. They're exciting, you see. What would the point be in having a 'race to the phones' competition that was open for three months? If we did, we'd probably get a letter from your brother in New Zealand complaining that his mag arrived the day after the competition. On the other hand, if we were to set a target date for three months ahead, would anyone honestly remember the date, what they were supposed to say, or even that the competition existed in the first place?

Next, what do you expect the woman to say if you ring up Future Publishing? I'm quite sure that if you'd have asked for Commodore Format, she'd have been more than happy to put you through to the either Hutch, Ollie or Simon, and you could have had a lovely little phone call. Instead, you obviously sat and dumped your troubles onto a switchboard operative who was obviously in the wrong for not being psychic, and got incredibly ratty when the next person you spoke to (probably Clur) wasn't psychic either. I can guarantee that you'd have got irate if you'd have had to wait while the receptionist explained to her what you wanted, anyway.

Next paragraph, or should I say gripe? The magazine is slow to arrive in New Zealand, firstly because of restrictions on sending them over there in the first place, and secondly because they're three issues behind, and probably wouldn't appreciate having two issues of potential CF action ripped out from under their feet by a moaning old grouch.

Finally, it was a nice try at a dig with that Buyarama thing, but if the game wasn't released, why should anyone want to try and buy a copy second hand? I would ring up Alternative and find out what happened to it, but I personally can't be bothered to waste any more time on anyone with an attitude like yours.

A FOOTBALL FREAK WRITES

Simon Forrester's excellent demolition of sports software earns my silver medal and free transfer to Avon Ankletappers (sent separately by parcel post).

He refers ('Torn Hamstring' paragraph) to poor sims, and this touched my sciatic nerve. Sidelined, I admit to no interest in the sim but a paranoiac addiction to statistical juggling to obtain team balance, success and euphoria, such as in Football Manager, which beats hospital. Please name the best footy or cricket software which equals or betters FM's statistical bias, and also name the ones which are too heavily sim and have little or no joystick manipulative bent.

I need to urgently feed my addiction,

Harcourt Gookesmoor, Southport.

This does present a slight problem for me – what happens when Simon reads this letter in the mag? He's going to threaten me with unimaginable tortures until he finds your address, and then you'll suffer a lot more than a torn hamstring. It's interesting that you mentioned the sciatic nerve (if you're less medically inclined, it's in your bum), because I'll make sure I don't tell him whereabouts it is. Damn.

***Match Of The Day* is quite exceptionally bad according to the review, so you'll probably like it for very much the same reasons Simon hated it at the time.**

We've had so many letters from people who think Lisa's sexy that we're going to start a fan club.

TOLD YOU SO

About this time last year, I bought a Megadrive, but I still owned a C64. As I was amazed with the graphics, sound and instant loading, I rather

abandoned my old machine. This is when it all went wrong. I completed three games easily and two of them had no playability at all. Later that year, I thankfully sold the horrible machine and have ever since concentrated solely on my C64. My point is that there's no substitution for pure gameplay. Oh and I love Sarah Butcher!
A Bloke, Somewhere

I think that pretty much proves the point for the other console-related letter in these pages. As for Sarah Butcher, that's one, then, isn't it?

HAYLP!

We recently acquired a C64 and 1541 for my daughter (and myself) and now I need to access my text files which were created on a BBC Master running under 1770 DFS and the VIEW word processor. Could you please tell me if it is possible to get those discs transposed from VIEW into Commodore format. Who does this? Is it 100% compatible? How much does it cost?
Much obliged,
Philip Richards, Pontypridd.

I know I've got this all-engulfing knowledge and everything, but to my infinitely wise knowledge, there hasn't actually been a program or service of this nature before, ever. Having said this, someone will probably read this and decide that the whole thing is perfectly feasible, and create a program or provide a service, so watch this space, and we'll let you know.

THAT DUDE IN BLACK

This is about the hundredth letter I've written to you, and I really need your help right NOW. You can help me by answering the following questions, please.
1 – I am stuck with Bards Tale 3, because when I enter the Dungeon Shadow, something asks me the answer of a riddle and it goes like this; "I have no lips but my kiss is deadly I am not a razor, but those I caress need never shave again. Your best friend, I will kill you. Speak my name, then ready me". Please solve it for me.
2 – Why did you spend your time with Roger's doom? Why do you hate him so, mutants aren't even hated that much.
3 – What's your IQ?
Arnold Raviel.

1 – **I don't even need to access my huge mental database of game solutions for this one, as it's really very simple. It's death.**
2 – **You've obviously never met this irritating, pubescent, grubby little oik before then, have you? How anyone could find the little toe rag even vaguely appealing is beyond even my knowledge. Besides, he stole my lucky poker cap.**
3 – **I'll tell you mine if you'll tell me yours.**

A RED DWARF FAN

This is the sixth time I've written to you. Here's a few questions.
1 – Do you like Red Dwarf? If you've never heard of it, check out BBC2 Friday at 9pm.
2 – Please get rid of Techie Tips (it's so boring) and replace it with something more interesting.
3 – Will Creatures 2 ever be a budget release?
4 – Who's sexiest, Lisa or Michelle Pfeiffer?
5 – Could I have Hutch, Ollie, Lisa, and Simon's autographs pretty please?

This is the sixth time I've read a letter from you, so I'm answering in the vain hope that you'll go away.
1 – **I liked it the first time 'round, but it gets a bit dull watching it all again.**
2 – **You might not like Techie Tips but other people find it incredibly useful and above all helpful. If you think about just how much of the mag is given over to games and entertainment, you'd think we could let the more serious-minded readers have the odd paragraph to themselves, wouldn't you?**
3 – **I very much doubt it.**
4 – **Lisa without a doubt.**
5 – **I'm very offended that you didn't ask for mine (even though I've got no hands), so the answer is a definite no.**

JOLLY ROGER

LETTER of the MONTH

If software piracy is such a problem, helping to account for the increase in computer games prices, why isn't more being done to curb it? ELSPA appears to have been very quiet these past few months. Is it any wonder that the problem is getting worse?

I understand that it is difficult to prevent piracy, but keeping quiet and subsidising losses through a higher price game is not the solution. If anything, ELSPA is proving to pirates everywhere what an inadequate anti-piracy 'system' is in 'operation' in this country. Surely if games were cheaper, then people would have no cause to turn to pirates for games, since they could buy the high quality original cheap enough. Pirates would then not be a threat.
Nicholas Wimbledon, Hadleigh

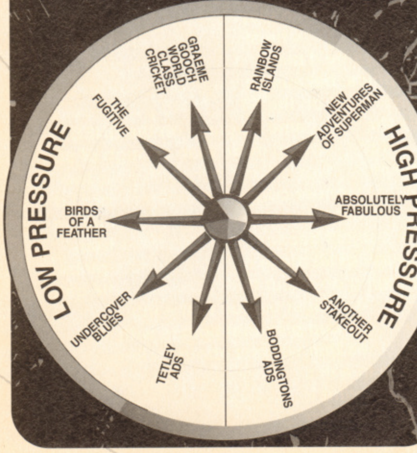
Unfortunately, Nicholas, you'd have a hard time convincing ELSPA of that. Though it stands to reason that pirates are copying these games because they don't feel they can get hold of them any other way, the software industry is determined to make up for their losses by bumping the already inflated prices still higher.

A sort of proof of all this is that when consoles arrived on the market, so did cart copying systems, allowing people to save the contents of a console to disc and play it again some other time. This obviously wasn't a tool for mass piracy, as only a few people had the system and no-one else could make use of the illegal discs, but those with the device obviously felt that they were necessary if paying £45 for an average game wasn't an option.

It's only very recently that the price of a console game has started to drop, and so has the piracy rate – the determined pirates aren't the ones who're out to make a lot of money very quickly, but the ordinary people who just want to buy a reasonable game at a reasonable price. As far as the C64's concerned, piracy isn't exactly a problem any more – we've all got access to copying devices, and we've all seen a pirated game at one time or another, but how can they expect people to get hold of them? More importantly, if these titles are no longer on general sale, at what point does the manufacturer lose money? Of course, I'm not condoning piracy here, I just think it might be a good idea to look at this from the pirate's point of view for once, as simply stamping your foot and telling people it's illegal hasn't worked – we've all seen proof of that.

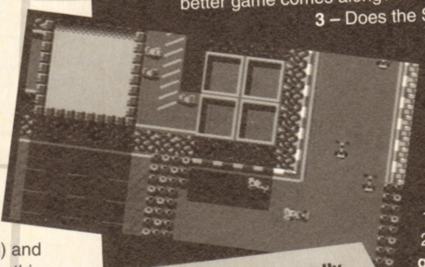
THE MIGHTY BAROMETER

This is the Mighty Brain's very own indicator of what's hot and what's not in C64 land and the world at large. Anything on the High Pressure side is hot, anything in the low pressure smells of wee-wee and eats crab paste sandwiches. If you disagree with any of these write and tell us.



THAT GAMESMASTER NOBODY

1 – Recently I was after a game called Speed King. After trying several mail order companies I have come to grief as I have not been able to get it. So please (sniff, sniff, weep, weep) please could you put this game on the Power Pack (grovel grovel).
2 – I fully agree with the CF team giving *MIM* 100%, but what happens if a better game comes along? What score would you give it?
3 – Does the Slicks demo cheat printed waaaaaaaay back in CF28 work on the full game?
4 – When is your birthday?
5 – How would you compare yourself to the Gamesmaster?
6 – I fully agree with Stephen Firth saying that Lisa is the sexy one.
Peter Hutton, Redditch



The dullest sport to actually watch is Formula One racing.

1 – **I'll have a word with the team…**
2 – **I'm still waiting for this better game you all keep talking about…**
3 – **Nope.**
4 – **I wasn't born in the conventional sense, and you can hardly celebrate a birthday at the dawn of time, can you? I mean, ask the Silver Surfer.**
5 – **What? That novice? He should go back to gazing at the stars.**
6 – **Is it just me, or have reader letters become a little lusty of late?**

R.I.P.Y.S.

Since the closure of Your Sinclair when I owned a speccy, I have had to move on to another home computer to satisfy my programming needs – so I chose the Commodore 64. I am now glad I have made this choice rather than purchase a 16-bit as I feel that I belong to the 8-bit scene, if you know what I mean.

Anyway, to get to the point of this letter, I ask only one question. Where can I get the Simon's BASIC cartridge that was mentioned in the manual that I got with my C64?

If you answer this letter, I'll assume that CF is the most ultimate magazine in the whole of the universe. If you don't answer my letter, I'll assume that CF is the most ultimate magazine in the whole of the universe – I'm a regular reader, you see.

Chris O'Sullivan, Birmingham.

That was a tear-jerking moment, wasn't it? I don't think yours was the only heavy heart reading the last issue. You made a wise choice with your C64, by the way. Onto your main point, about the BASIC cart, which I shall answer with TMB Stock Answer number 37 – "Read the Buyarama section and see if anyone's selling what you want". Oh, and thanks – we do try.

FRAMES SLASHED SHOCK!

1 – In CF34 there was none of you. Why?
2 – Can I have an autograph of all your crew?
3 – Why aren't you going to print this letter?
4 – Whenever I try to do a listing, why oh why don't they work?
5 – Could you tell me all the games for the C64?
6 – Roger Frames is a pain in the neck. I always cut his part out of CF.
7 – Your mag deserves 100%.
Philip Thomas, Wales.

1 – **I was there, it's just that I couldn't put my hand up when they were doing the contents page, because I've got no hands (it was a bit of an odd month all in all).**
2 – **What's the magic word?**
3 – **Too late.**
4 – **I think that might have something to do with you, Philip.**
5 – **How long have you got?**
6 – **Well, thanks to me pulling a few strings in a certain other country, you don't have to mess about with scissors any more.**
7 – **Thank you. So does your letter.**

NO WAY!

I am writing to ask your permission in using cheats printed in your magazine. I recently read the article 'Coming On Strong' in issue 40 of CF, and I found out there is a lot I can do to help the Commodore live longer. At the moment I am programming a game, and I intend to start a software house, featuring me and me only. I intend to write a book on cheats for Commodore games. This I do to get my name known, so I might get more orders for my game when released. I have a good amount of tips and cheats and a good many games but I need cheats printed in *Commodore Format* each month in my book. I'll probably ask the other CF too but I'll talk to you first.

John Crotty, Co. Waterford.

I hate to tell you this, but the cheats printed in the mag each month are either copyrighted to *Commodore Format*, or the original authors. It's not really our place to tell you to go ahead and use them, and the people in suits would probably say no if it was. If you want publicity for your game, just send it along to us and we'll review it, anyway. By the way, it's probably a bit late to talk to the other CF now.

ANONYMOUS OF IRELAND

I have a few questions for you.
1 – Will there be a *Rick Dangerous 3*?
2 – I have been told that the Commodore will not be out by Christmas 1994. Is this true?
3 – Will *Super Street Fighter 2* be coming out on the Commodore?
4 – I have been trying to get *MacDonaldland*. Where can I get it in Ireland?
5 – Will there be a Commodore console not like the Amiga?
Anonymous of Ireland.

1 – **Nope.**
2 – **If the truth be known, it wasn't exactly 'out' last Christmas, but you can still buy games, this mag, and all manner of add-ons through the reader ads. Don't worry about what the 16-bit owners say is 'out' or not.**
3 – **Nope number two.**
4 – **Try mail order pages, Anne.**
5 – **Nope number three.**

THEY WERE CRAP

I wish to complain about the *Commodore Force* magazine over the past couple of months. I have noticed the magazine has gone up to £3.50 instead of the normal price £2.50. The question is why is this? I have one more question, why is there only 50 pages instead of the usual 66?

They were a bit crap, weren't they?

BRAINLESS GONK

After reading your poor excuse for an article in CF41, I think that I should set the record straight. Consoles will not die the quick death you envisage. Uridium on console for example was not a re-hash of the original. The idea was taken and improved.

The C64 will eventually disappear. People will want games and systems that do not look like a page of ceefax. "AHA" you say, "but you can't make games on console." YOU ARE WRONG. On many CD systems, design programs are emerging. You say "But what about the price," It's an investment in something that will stand the test of time (unlike the sad, sad, sad C64).

Consider the 8bit – console transition a "refinement". A turn from sad to sizzler. With a console you have a miracle. Amazing! You can have more than 16 colours. you can't see the stupid great hulking pixels. (This may blow the combined mind-power of the CF crew). Electronic Arts new 3DO has no limit to the number of on-screen sprites. I have a C64 but I am awaiting its death. Two members of the CF crew used to work for a console magazine before CF. In CF40 it says that Simon keeps playing Flashback on the SNES. Please voice my opinions in CF as I have evidence. (Tell Lisa she is sexy). (His Hutchness indeed).

Some braindead prat, Idiotsville.

Oh dear, oh dear, oh dear me. What a shockingly sad person you are. Right then, this is going to be fun. But where to start. Your first assertion is that consoles will not die a quick death. Well, excuse me, but that's what they said back in the mid-'80s shortly before all the consoles climbed up their own backsides and kicked the bucket. And forgive me if I'm wrong but hasn't the C64 kept going right throughout that entire period.

You claim that Uridium is not a re-hash and in the next sentence say that the idea was taken and 'improved'. Sounds a bloody lot like re-hash to me.

You then say that design programs are emerging on CD. What complete rot. The only design programs you can get for CD–ROM systems are the programmers development kits which cost upwards of £10,000. Just the sort of thing everyone can afford. Ha!

You say that it's an investment that will stand the test of time. Yeah right, the 8-bit consoles had a shelf life of about four years. The SNES and Megadrive have had two good years and have only got another two years in them. What a fine investment that is, compared to meagre computers which only last you a decade.

Who gives a fig how many colours you have on screen. When are people like yourself going to realise that the only thing that counts is playability – a commodity that console owners are admittedly unfamiliar with.

Oh dear the poo gets deeper. Electronic Arts haven't produced 3DO. The ex-head of EA, Trip Hawkins has. It costs £800 and so far has received all the support of the C5. Who cares how many sprites it can display. Unless you've got a TV the size of house you can only see the usual 64 sprites on-screen at once. Besides which the 3DO can move 64 million pixels a second (data supplied by Edge magazine next door). Assuming that the average 3DO sprite is made up of 50x50 pixels (this is a conservative estimate), that means you get 25,600 sprites. And even that depends on the size of the blimmin' cartridge. So you're quite obviously wrong.

As to the 64's death – you're sat there like a timid shrew waiting for. Well whoopy do. Meanwhile everyone else is using their's to play games on.

As to the working on other console mags, they all do freelance for them. It's so they can pay things called bills. It doesn't mean that they think consoles are dead great or anything, it means that they can buy food and put a roof over their heads.

As to Simon playing Flashback on the SNES, he says he also plays it on the Amiga. He says he'd play it if it had abysmal graphics, because it's a good game which started out on the ST. He also points out that it's the only game he plays on the SNES.

Right I've had more than enough of you, so kindly clear off and play with your two minute wonder console. For the record I'd like to say that this is the last letter I'll print on this subject because I've had more than enough of all these console owning plebs whinging on about their precious little games machines. Must be due to the inbuilt inferiority complex that comes with owning machines that will last about as long as an ice cream in a microwave. Oh and by the way, anyone want to buy a slightly used Sega Saturn, 3DO and Atari Jaguar?

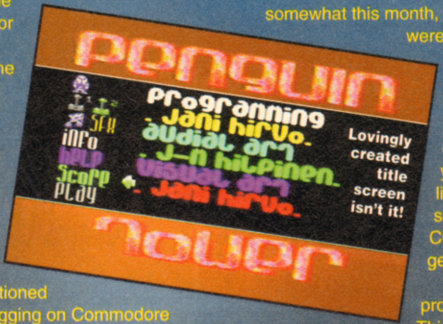
Love is in the air, every sight and every sound.

CAPTAIN STEM'S DATAFILE

Fresh from the Crab Nebula and a small diplomatic incident on Ginfrot 5, we bring you Captain Stem, time traveller and wine critic...

Stem here. Fresh from the space/time vortex and ready for action. I've been flitting all around the cosmos looking for action, adventure and one of those whicker chairs that hangs from the ceiling, but I haven't had much joy.

Anyway, on my travels I encountered Glarexxxtyp or The Mighty Brain as you better know him. To cut a very long story short, he mentioned that there was a job going begging on Commodore Format. Being a bit short on the old Earth money I got in touch with Hutch, and well, here I am.



Lovingly created title screen isn't it!

DAY TRIPPER

Over the course of the next 12 pages you can find my datafile. In conjunction with the wonderful CF crew I've collated all sorts of interesting reviews and features. This month we cover everything from book reviews to a retro review – I zipped back in time to pick up mint copies of a couple of games.

The EDOS review section has shrunk somewhat this month, not because there weren't any games to review, but because I wanted some books reviewed. To that end, on page 16, you'll find a page of literary criticism – all sorts of books, both C64 specific and general stuff all rated.

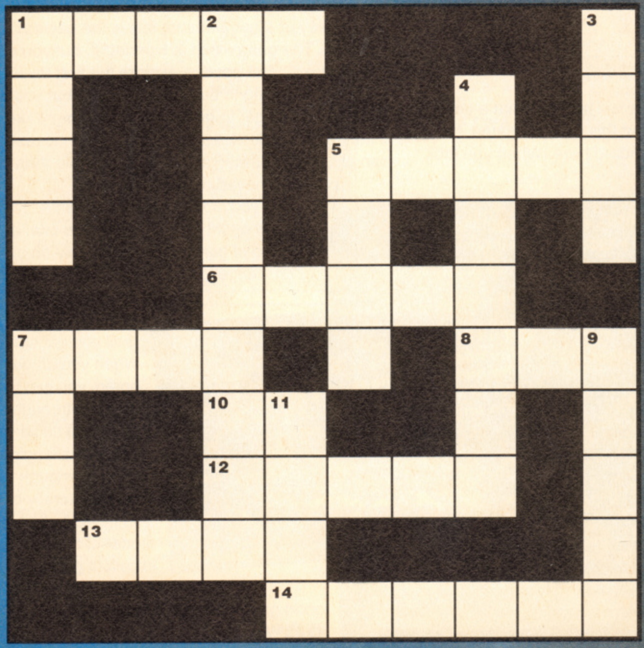
I'm particularly proud of the A-Z of sport. This was exhaustively researched by my little team of pixies and represents many hundreds of man hours, slaving over a hot word processor.

Over the coming months I'll be seeking out new and interesting programs and books to review. Already I've managed to track down two completely new and original games – including Penguin Tower which you'll find some screen shots of on page 8. Watch out for my full review in next month's issue.

GET AWAY!

- **Best CF team exam result:** a BA Honours degree (Hutch).
- **Number of letters that *Commodore Format* receive on average every day:** 30.
- **Average number of words in a single issue of *Commodore Format*:** 50,000.
- **Most ridiculous excuse Hutch has heard from a freelancer for late copy:** My stoat died.
- **Number of times we've had to lay out the Mayhem gamebusters section because the grabs keep corrupting:** 10.
- **Most common reader letter:** what's your favourite game.
- **CF team's favourite game:** Mayhem.
- **Stupidest letter ever received:** Company telling us not to use the trade name Biro when refering to a disposable pen.
- **Number of times that Simon made the coffee in the last week of the issue:** once.
- **Prefered choice of TV programme in the CF office when on deadline:** Captain Scarlet.
- **Magazines on the same floor as *Commodore Format*:** Superplay, PC Gamer, Mega, Edge, Amstrad Action.
- **Game which has been on the office C128 for the last two weeks solid:** Penguin Tower.
- **Number of Commodore Format antipodean freelancers:** 2 (Lewin Edwards – Australia, Shrewd Software – New Zealand).
- **What's brown and sticky:** a stick.

Right, well, I've taken up too much of your time already, so here's some rather interesting facts, a crossword and a gratuitous shot of an attractive lady..



ACROSS

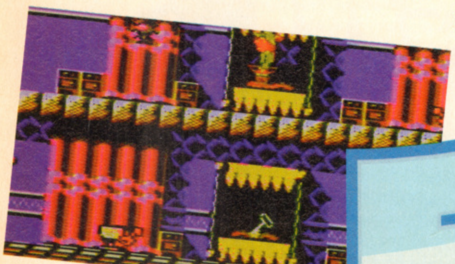
1 CF's Editor (5)
5 Blinky is one of these spectres (5)
6 Punky art editor, but not Reed (5)
7 What a software house did to CF after they got a particularly low score (4)
8 Your computer has 64K of this (3)
10 Either (2)
12 These grow on you (5)
13 This time travelling Captain's got his very own new section in this issue of CF (4)
14 Brilliant arcade movie licence with big xenomorphs which was better in the US edition (6)

DOWN

1 Speilberg made a film of about this famous pirate and Ocean made the game (4)
2 The company that manufactures the 64 (9)
3 This party shows off all the CF reader's creative side (4)
4 Our Andy gamebuster extrordinaire (7)
5 Not American but certainly US software house based in Birmingham (4)
7 Your 64's sound chip (3)
9 Vertically scrolling Commando-style shoot-'em-up and nickname for a flash German motor (5)
11 What the Italians call their capital city or possibly a slightly truncated smell (4)

Simon takes another amazing journey into the land of mega-cheap software. he sends us this amazing report...

EDOS YOU KNOW

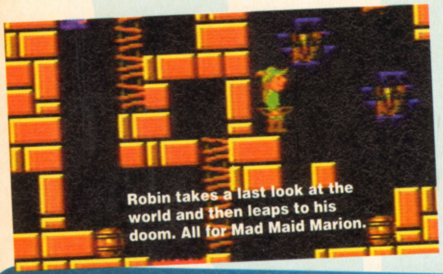


Now where could that key be hiding. I know, it's under that potty full of poo.

SUPER ROBIN HOOD

The Codemasters are back, with a game that owes slightly less than usual to the egg (they're never going to be allowed to forget 'those games'). You play the part of Robin, on a mission through the sheriff's castle to rescue your sweetheart, Maid Marion. This is somehow achieved by collecting lots of hearts from around the castle, and taking them to her. I know. This guy's dating a cannibal. You think you've found a decent, honest woman, and she turns out to be a man-eater. Literally.

So off Robin travels, flicking through screens stuffed full of platforms, ladders, huge insects and the corrupt men of the sheriff's law who're all armed with crossbows, in an effort to collect the hearts that can appear to be nailed to the walls, and take them to Marion who, presumably, will wolf the lot then marry you. Hold it right there.



Robin takes a last look at the world and then leaps to his doom. All for Mad Maid Marion.

I didn't mention the speech. For some reason the Oliver Twins (who came up with the game) saw fit to include several sampled messages for you as you progress through the game, mainly involving Marion calling for your help every time you find one of those floating hearts.

This guy's dating a cannibal. You think you've found a decent, honest woman, and she turns out to be a man-eater. Literally...

I'll cut to the chase here – this game is fun to play. Robin can run, jump, crouch, and, more importantly, shoot, so you'll have no problems getting about. The castle is nicely designed with enough rooms to get you lost in no time at all, but also with enough to keep you so occupied you won't worry about where the hell you are.

Occasionally things do get a little irritating as Robin doesn't exactly move quickly out of danger, but this is still an enjoyable platform romp that'll keep you happy. Just don't take her out for lunch afterwards.

71%

TURRICAN

Now here's a game. People will tell you what a good game is and what it isn't, but this is a real game. I'm talking nearly *Mayhem* standard here. When you look at it, it's just another platform style game, but it goes quite a bit further than that.

First of all, it scrolls vertically as well as horizontally, so you're not restricted to take one particular path through the levels. Secondly, you can go anywhere you like at any point – sections of the game aren't closed off to you, so once again you don't feel at all restricted while you're playing.

The plot is irrelevant, but probably involves journeying through an unknown land to defeat a tyrant. The blokey you control is anything but standard – he has a very powerful gun, loads of land mines, a laser beam, and the ability to turn into a large metal wheel and make serious progress in a very short amount of time. As well as this, you can get down to some serious jumping, as you don't have that annoying restriction of dying when you fall too far.

So with this amazing set of abilities, you set off across the alien terrain, exploring caverns, towers, mountains, waterfalls and odd metal structures, collecting crystals and blowing away everything that shows its face.

By way of a comparison, this is the useless man's Turrican. The game itself is wonderful, but you don't have to be all that good to explore the first level. If you were planning to buy *Game Over 2* but you don't think you could get to grips with it, you might like to think about Turrican, as it's probably the closest you can get, and a darned sight more playable than its second removed cousin.

If you did decide to buy Game Over 2, you still ought to think about this one, as it's the kind of game that doesn't rely on difficulty or challenge to keep you occupied, but just lets you get on with running around killing things until you get bored. When you do get bored, you can continue through the game and do all your normal challenging bits – there's enough to explore laterally before you have to climb the ladder of the game. So, excellent graphics, great sound, and a stonking good game to boot. Yippee!

90%

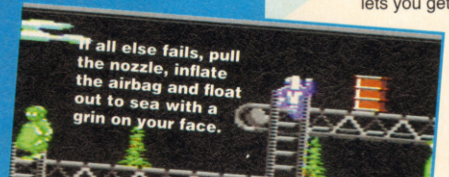
GAME OVER 2

Spanish games always look nice – it can't be denied that all that blue chrome artwork definitely works well in a computer game. Spanish games also invariably involve travelling from left to right across a horizontally scrolling landscape killing things, either as a space ship, a person, or a ground vehicle. Game Over 2 is the person variety and, as it's in the Spanish game style, is really very difficult indeed.

When I say difficult, I mean it. Your standard mission (to defeat whoever happens to be trying to conquer the planet) is hampered by incredibly hard bad guys, massively difficult timing (on far too complicated jumps), and the occasional part that requires the gameplaying skills of a minor deity.

There are many people who'd tell you that an unplayable game isn't worth buying, and they'd be right. The games released by Dynamics only really have one redeeming feature you see – they don't stay too difficult for long. Well, this one doesn't. Once you get the hang of using your full range of weapons to your best advantage, you can settle down to play a game that'll probably keep you hooked until you're finished.

Gaming novices beware, though – this is not a game for the inexperienced. This is a gameplayer's game. If you rush out and buy it right now, don't expect any sympathy when you call the office and tell me how difficult it is. You should be pleasantly surprised by a release that doesn't patronise the hell out of you with level after level of irritating (and above all boring) ease.



If all else fails, pull the nozzle, inflate the airbag and float out to sea with a grin on your face.

80%

I saw that Anneka Rice in John Menzies the other day. She didn't recognise me, fortunately.

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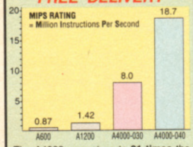

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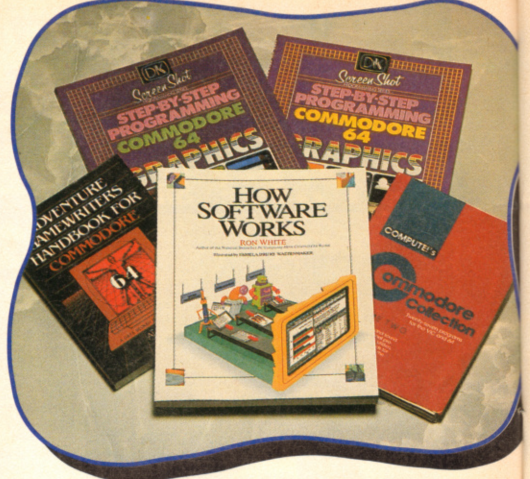
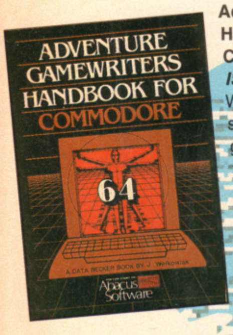


You've got a computer, and the fact you're reading this is proof that you've found a magazine that deals specifically for it. Wonderful things, magazines. The only problem is that we only do this once a month, and because of space limitations and the demands of the mass readership, we can only cover so much, and have to leave some more heavily technical subjects untouched. If you want to cover something in more detail, the obvious answer is to buy a book. Which one, though? It's marks out of ten time for the following new and slightly old titles:



Adventure Gamewriter's Handbook For The Commodore 64
ISBN 0-916439-14-3

When we ask for covertape submissions, you can guarantee that at least 90% of them will be SEUCK games. It's not that we don't like SEUCK games, it's just that they're all very similar. Surprisingly, we don't get all that many text adventure games which, given the fact that they're easy to write in BASIC, they're fun, and you can use as much humour as you want, matey.

If anyone would like to write a text adventure for us, though, they might want to take a look at this book – it's a complete guide to writing a full text adventure in BASIC. As a tutorial, it works very well, as even the principles you're not exactly very clear on are explained in detail. As for actual adventure writing, this book won't help you out with a plot – you're going to have to do the creative thinking part yourself, but once you've got a clear idea of what you want, this is a book that should show you how to get it onto your C64.

RATING: C+

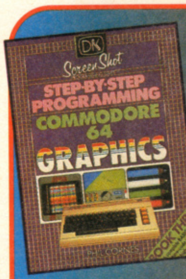
Compute!'s Commodore Collection Volume Two
ISBN 0-942386-70-1 *£11.95*

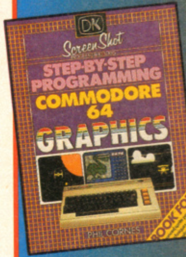
Unlike the text adventuring book, there are some that don't have any major theme other than just programming. This is one of those books that resembles a rare and twisted form of hell, until you've actually typed in one of the programs, after which you just feel, well, spent.

In between the oddly-bound pages, you'll find 27 different programs to type (VIC20 versions are also given, nostalgia fans), split into different categories such as games, education, applications (serious software, to the rest of us), graphics and sound, utilities and programming aids.

If you want to buy a book of programs (maybe you like that sort of thing – it's very relaxing, after all), this has to be one of the better ones you'll find. There's a wide variety of games included, along with a set of utilities that should seriously help you on your way. If you're a beginner, though, and you think you might need a bit more help than a book full of programs has to offer, worry not – there's a groovy little automatic typing checker to spot your mistakes for you. Get me my smoking gown please Geeves.

RATING: B-





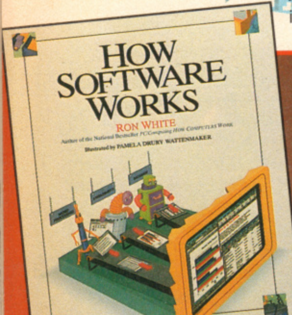
Step-By-Step Programming Commodore 64 Graphics
Price: £6.95

We'd give you the reference number, but there are several books in this series. As the title suggests, they're based specifically around programming fancy graphics on your C64 without leaving that luxurious centrally air-conditioned environment of the built-in BASIC.

The effects the book enables you to achieve are really quite wonderful – loads of pretty little patterns that not only look good but teach you a hell of a lot about simple mathematical relationships, geometry, and computers, without you even being aware of it (so many children, unbeknownst to them, turn out to be geniuses through piddling around on their home computers). As the series continues, though, we get heavily into the realms of hardware sprites, scrolling, and all manner of immensely technical things that'd scare the willies out of Vlad The Impaler.

The really strange thing about this series of books is that they appear to have been written with a younger age group in mind. I'm not sure whether patronizing your age group is either wise or the case, but it certainly helped me to understand what they were talking about completely.

RATING: B+



How Software Works
ISBN 1-56276-133-1
£22.95

Holy fishmongers – this is a big book. It's impressive as well. The idea is to explain in simple terms exactly how incredibly complex programming structures and concepts work. This means that you'll stumble across huge glossy chapters flippantly named 'How Vectors Work', which manages to explain very complex 3D vector placing and image-mapping with the aid of a few coloured arrows and the odd picture of a robot.

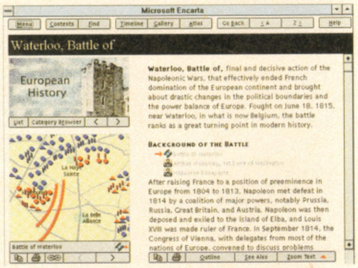
If this sounds appealing, you should know that this book isn't based around the C64 – most of the stuff discussed is more relevant to the PC or Apple Mac, but this doesn't make the book worthless – I found simple explanations to some confusing things that I've come across before. You see, this is the kind of book that'll serve you well in the future as a reference guide and a learning manual combined, and would be invaluable to schools, colleges, computer clubs, and most of all, parents (who somehow manage to get completely confused when it comes to what a disk does, where the power switch is, and other such devilishly complicated aspects of every home computer).

RATING: A-

Feed your brain.

We went to the beach, just Grandma and me.

Educate.


Microsoft Encarta
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European History
List
Category Browser
La Haye Sainte
La Belle Alliance
Battle of Waterloo
Outline
See Also
Zoom Text

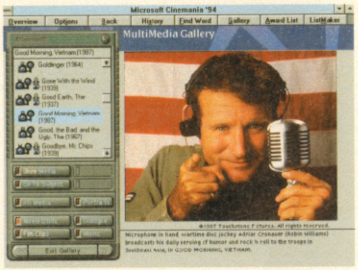
Waterloo, Battle of

Waterloo, Battle of, final and decisive action of the Napoleonic Wars, that effectively ended French domination of the European continent and brought about drastic changes in the political boundaries and the power balance of Europe. Fought on June 18, 1815, near Waterloo, in what is now Belgium, the battle ranks as a great turning point in modern history.

BACKGROUND OF THE BATTLE

After raising France to a position of preeminence in Europe from 1804 to 1813, Napoleon met defeat in 1814 by a coalition of major powers, notably Prussia, Russia, Great Britain, and Austria. Napoleon was then deposed and exiled to the island of Elba, and Louis XVIII was made ruler of France. In September 1814, the Congress of Vienna, with delegates from most of the nations of Europe, convened to discuss problems

Inform.


Microsoft Cinemania '94
Overview
Options
Back
History
Find Word
Gallery
Award List
ListMaker
MultiMedia Gallery
Good Morning, Vietnam (1987)
Goldfinger (1964)
Gone With the Wind (1939)
Good Earth, The (1937)
Good Morning, Vietnam (1987)
Good, the Bad and the Ugly, The (1967)
Goodbye, Mr. Chips (1939)
Exit Gallery

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Microphone in hand, wartime disc jockey Adrian Cronauer (Robin Williams) broadcasts his daily serving of humor and rock 'n roll to the troops in Southeast Asia, in GOOD MORNING, VIETNAM.

Entertain.

CD-ROM Today

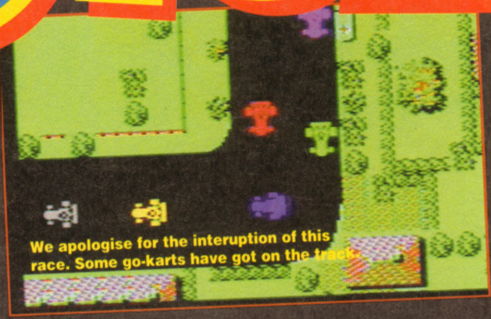
We'd like to help you explore the amazing new world of CD-ROM for the Mac and PC.

Our magazine, complete with 600Mb disc, is out on March 31st – Easter weekend. See you then!

Future
PUBLISHING

PD FORMAT

Look – it's the same every month. Simon Forrester, free software, public domain reviews. Just read the thing, will you?


We apologise for the interuption of this race. Some go-karts have got on the track.

I love the Electric Boys PD library, I do (the band they're named after are a bit crap, though) – they've made my job about a million times easier by sending in a selection of their latest titles (they could be named after the chorus of the Creaming Jesus song Stray Toasters, though, as that was pretty good). Whatever, here's this month's snatch of software, all on PD Games Disk 1 (along with some other fings) for just £1.50 from Electric Boys, 917B Brighton Road, Purley, Surrey, CR8 2BP. Failing that, you could phone 081-668 7595 for more details.

AUTO-RACER

About three months ago, the mag I used to write for received a full priced version of this game, which was quite expensive and absolutely no different. Needless to say, it didn't get a good mark (sorry, James). Why?

Once we've selected a car to race (are you telling me that you hadn't figured out what kind of game Auto-Racer was?), we're plonked onto a road with seven other cars, with a view to screaming round the various tight bends, chicanes, and all the other cars. This is harder than it may at first appear, as not only does your car have a tendency to slip about all over the shop with some unnaturally heavy inertia, but the other cars can drive straight through you, causing you untold amounts of damage while they just happily trundle off in search of the finish line.

Looks as if it might be quite good, doesn't it? The problem comes when you sustain too much damage to your car – you're presented with a screen of statistics and a cursor, for you to get all the dangerously weighted figures back down below the safety line before the time limit runs out. Fast statistics action, huh sports fans?

As a full price game, I remember ripping this little number to shreds. As a PD game (though I'm not trying to imply that all PD games are rubbish), it works, though you won't find yourself racing so much as swerving all over the road trying like hell to keep up.

75%

ESPODILL

Now here's the jewel in the collection – a game that should have had a full price release at around the turn of the decade. It's a break-out clone, with quite a few extra bits tacked on. Strangely enough, for a PD break-out game, it doesn't resemble *Arkanoid* one little bit (save for the rather heavy use of blue).

At first it all looks pretty simple, with bricks and the occasional one-way barrier, but it gets a lot better – you can influence the direction of the ball. This is done by holding down fire and hitting a direction, and for a single feature, it manages to add an extraordinary depth to the gameplay.

Using this feature, you can make the ball stick to one particular wall, or change direction in mid-flight, enabling you to get at some of the trickier bricks. The real problems start when you influence the ball too much – it travels incredibly fast, so keeping track of it with an incredibly heavy bat is not as easy as it may sound – the bat has inertia.

Normally, inertia means that things take a little while to speed up, and a little while to slow back down to a stop. This isn't so much inertia as INERTIA – at times the bat is completely uncontrollable, as is the whole game, but it all adds to the fun.

If I'd received this game for a full-price review, I would have commented on the lack of depth by way of a few more power ups, and given it around 75%. I would also have complained that the tune reminded me too much of the Goodies theme tune, and ponder for a few paragraphs as to how they managed to get a really accurate kazoo simulation from a computer.

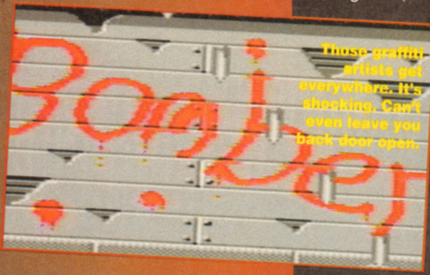
This isn't a full-pricer, though, so I'll simply say that this game is truly excellent, and you should get hold of it right now. Job done. *(Can we possibly have our copy back now please Simon? – Hutch)*

90%

BOMBER

Some of the best games ever had completely nob concepts, plots, gameplay and everything else. Some were just cack. Bomber is an odd game – it's all about a bloke who strolls around at the top of a wall, dropping bombs onto you, down below. It's your job to catch them in your (I assume bomb-proof) bucket. This, apparently, defuses them.

That's it. As you progress through the 'levels', things get gradually harder, meaning that the blokey starts dropping the bombs in irregular patterns to confuse you. It doesn't confuse you. The speed at which your bucket moves is exactly the same speed at which you'd need to travel in order to collect the harshest of bomb patterns. This game is all about knowing when to toggle between pushing left or right at different times. It's not very good. It really isn't.

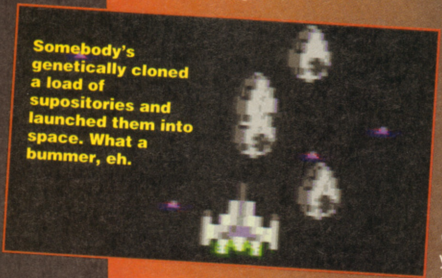

Those graffiti artists get everywhere. It's shocking. Can't even leave you back door open.

There is a general opinion amongst PD people that if a game isn't good enough for a full commercial release of its own, it can go into PD. What happens when a game isn't good enough for a PD release? It gets a PD release, and innocent victims are duped into playing it.

10%

MUCHLY STRANGE

And indeed it is. This is Galaxians, but in this version they don't hang around in nicely order rectangles waiting for you to shoot them into several thousand pieces. Instead, they spend their time hairing down the screen towards you. This, to say the least is quite scary (if you're into that sort of thing).


Somebody's genetically cloned a load of supositories and launched them into space. What a bummer, eh.

The brown-trouser factor kind of wears off when you realise it's impossible to die, though. So it's just a shoot-'em-up, then.

Hold on a mo – some of this looks familiar. Very familiar, in fact. Those aliens were ripped out of *Jet Set Willy*. And those witches originally appeared in *Cauldron*. This is a bit dodgy. It does provide you with the opportunity for revenge against the little bleeders that managed to give you a nasty dose of the IDS (Infinite Death Syndrome) by wiping them out in their hundreds.

I think that's the point of this game. *JSW* was really irritatingly difficult, which made it, fundamentally, crap. Muchly Strange is obviously an attempt to appease the gameplaying nation by giving them a chance to get their own back. I, for one, am grateful. One thing I'm not grateful for, though, is the endless rendition of the *Tetris* theme tune.

80%

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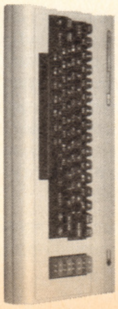

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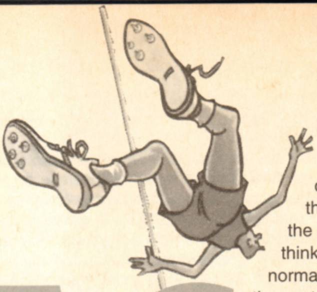
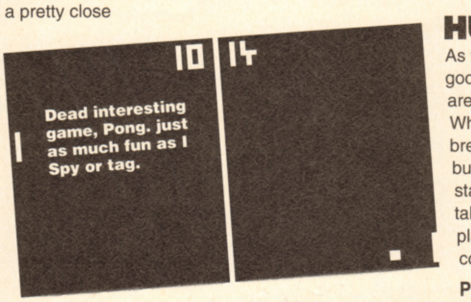


There's more to a simulation than meets the eye – Simon takes you through some of the more mystic areas of the sports sim domain.

That's right – there is more to a simulation than meets the eye. The end result may be a game on a disc that gives a pretty close approximation of wrestling, running, shooting, or even evens such as pole vaulting, but how close are those simulations to the real thing? How would the skills and knowledge gained in those games help you if someone placed a vaulting pole in your hands, stood back, and said "Go on then"?



Dead interesting game, Pong. just as much fun as I Spy or tag.

Even when we leave the direct level of a sports sim, what gameplay elements could be found lurking under the surface of other, more abstract computer games? Are sports sims and the concepts therein linked with the idea of the classic computer game, or have they always run at a tangent to mainstream releases?

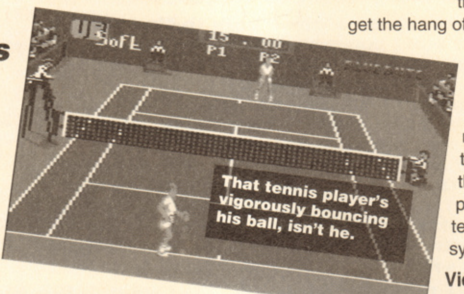
HURDLING

As we all know, there are good sport sims and there are completely crap ones. What actually makes or breaks a sim is debatable, but there are always some standard problems when taking a sport from the playing field onto a computer screen.

Physical

Strength – Well, this is a bit of a problem, isn't it? How do we represent the need for physical ability and stamina in a computer game? Being good at running has nothing to do with being good at a running game, and being good at football won't alter the fact that your computer team can't do half the things you wanted it to. Unfortunately, this problem has caused a gameplay style that's turned people cold since the dawn of the sports sim – waggling. The idea is that to represent physical toil in a runner, the player has to waggle their joystick as hard as they can (you've all played that kind of game). This, unfortunately, has nothing to do with physical strength, and trashes joysticks in their thousands. Congratulations joystick manufacturers everywhere, and hard cheese to the rest of the gameplaying population.

Team Troubles – Sport sim hurdle number two is the difficulty in getting your team to act as you want them to, as opposed to them acting as the computer thinks best. The normal solution for the control of an entire team is the arrow system, where you control the player nearest the ball, highlighted by an arrow. This is a strong idea, though it takes a while to get the hang of the whole thing and keep up with the active player swapping regularly as different team members get nearer to or farther from the ball. The odds are, though, that if you're playing a simulation of a team sport, this is the system you'll be using.



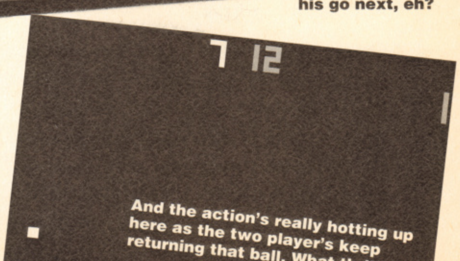
That tennis player's vigorously bouncing his ball, isn't he.

Viewpoint – One of the more discreet problems you'll notice if you sit back from your football game or even your snooker sim is that of viewpoint – where you on the pitch, you could look around and line up a shot perfectly, but as soon as you switch to a joystick controlled overhead view, you have only eight directions in which to hoof the ball, and even then you can't see further than the perimeter of the usually very small scrolling window. Unfortunately, for fast moving yet detailed games like football, there is no real solution to this problem, but if you take a look at a game like snooker, there is obviously quite a lot we can do.

The big question after three huge handicapping problems, then, is whether these games are effectively useless – with all these hassles, you could be put off for life. The simple answer is don't be. These games give the most accurate version of the sport they can, and the situation doesn't improve on other machines – this is the way sport sims are, and it's the way they'll stay until VR and 3D image systems get a hell of a lot more advanced than they are today – these games are about as good as they're likely to get for quite a while to come.

FRAMES
0
BALLS
5
SHOTS
HI-SCORE
0

Yes, but where's the wall you can't cue against, the fag burns on the felt, the bloke who insists it's his go next, eh?

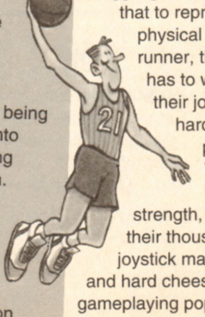


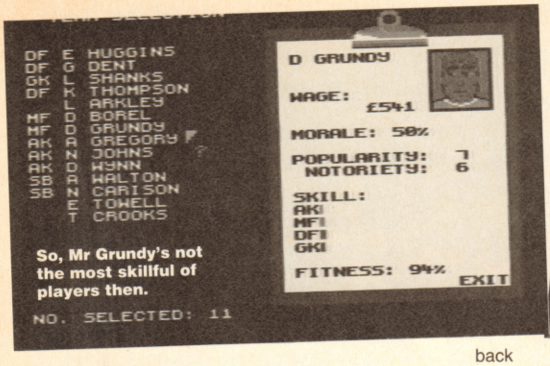
And the action's really hotting up here as the two player's keep returning that ball. What thrills.

DIGITAL TRAINING

If you're the kind of person who keeps up with the latest technological developments by reading magazines such as our sister, *Edge*, you'll be constantly aware of the new craze sweeping the computer world – virtual reality. If you start to venture outside of the world of computer entertainment, you'll discover that VR is also being used for more serious purposes – from pilots in training to architects who want to take a stroll around their creations before they've started building them, everybody's jumping on the band wagon.

Simulation is nothing new, though – sports sims have been around for a long time. The big question is, can an athlete derive the same kind of training from a computer simulation that a pilot can? Obviously they're not going to gain any muscle tone, but there's a lot more to sport than being a muscle bound meat head – tactics and strategy come into play a lot of the time. Unfortunately, in a paragraph wasting fashion, there is very little to be learnt from any sports sim. Whereas speed skaters might want to watch themselves to work out where their stance is wrong, and footballers might want to watch film of their opponents, there is very little to be learnt from any sports sim about the sport itself. This isn't a failing of the C64 alone, though – the most powerful machine running the most realistic simulation couldn't help you here.

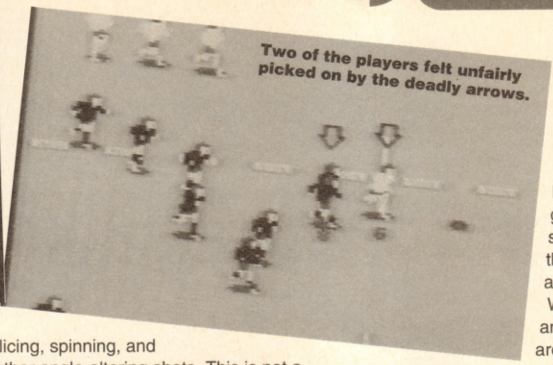




```
DF E HUGGINS
DF G DENT
GK L SHANKS
DF K THOMPSON
   L ARKLEY
MF D BOREL
MF D GRUNDY
AK A GREGORY
AK N JOHNS
AK D WYNN
SB A WALTON
SB N CARISON
   E TOWELL
   T CROOKS

NO. SELECTED: 11
```

```
D GRUNDY

WAGE:
      £541

MORALE: 50%

POPULARITY:  7
 NOTORIETY:  6

SKILL:
AK
MF
DF
GK

FITNESS: 94%
                EXIT
```

So, Mr Grundy's not the most skillful of players then.



Two of the players felt unfairly picked on by the deadly arrows.

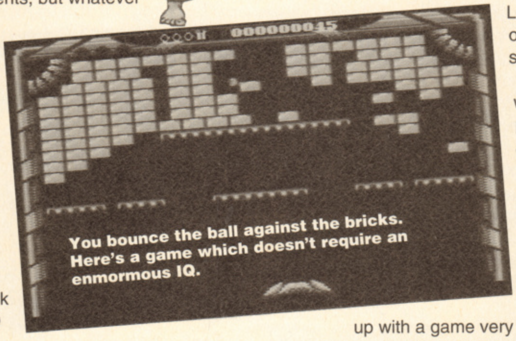
LOOKING BACK

It's all very well talking about the future of sports sims and the current problems that the industry will have to iron out in the game to come, but everything has its roots in the past. Indeed, you can get quite far predicting what is to come from what's gone before – take ping pong.

If, several years back, you owned an early Atari (or even Binatone) game system, you'll be familiar with early bat and ball games. If you want to look at the way games have developed over that time, take a look at the following two grabs:

Though the two games look massively different, there have only been a few major changes:

Scoring – Obviously, if you want to make the transition from simple bats and a ball to tennis, you'll have to change the scoring system from a race to 21 points to a system involving games, sets, and matches. The tennis game featured went all the way to recreating tournaments, but whatever is done, all that's involved is mathematics, and simple changes to the scoring system.



You bounce the ball against the bricks. Here's a game which doesn't require an enmormous IQ.

Perspective – Take a look for yourself. You could either have a flat, overhead view of the proceedings, or a ball bouncing back and fourth in full 3D perspective glory. This has made very little change to the gameplay, though it has caused one major gameplay flaw – playing the blokey stuck at the back of the court (in a two player game, for example) is an obvious disadvantage for accurately aiming a shot, or even hitting the thing.

Graphics – Here's an alteration that makes absolutely no difference whatsoever to the gameplay, as the white rectangles have simply been replaced with animated figures who serve exactly the same purpose.

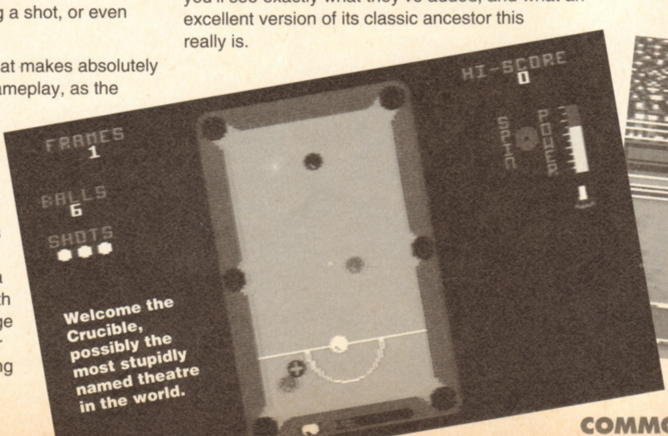
Shot detail – Congratulations, we've finally found a change that's done something big. In the old version of the game, the ball had a simple angle of incidence affair with the bat. Nowadays, you can change the direction of the shot using your position in relation to the ball, hitting back hands, slicing, spinning, and various other angle-altering shots. This is not a sophisticated alteration though – break-out games (try *Arkanoid*) have been using a similar system for ages (though not quite as advanced).

Walking forward – Obviously, this is an addition exclusive to tennis, being that you can now walk forward toward the net giving a faster return on the ball, whereas before both players were stuck on the back line. This particular addition came from computer versions of squash, which have had this feature pretty much since the start. Obviously, ping pong games don't have this feature.

DIVERSIONS

Always remember that when games develop, they don't follow straight paths; sports games don't give rise to just sport games. Let's take a look at a classic old TV game, a version of squash:

This particular version was two player, but one player versions were just as frequent. What happens, then, if we rotate the whole thing by 90 degrees (or not even bother to do that, in some games) and let the player smash through the back wall of the court? We end up with a game very much like break-out, which has gone from strength to strength, and has been responsible for a hell of a lot of commercial releases since its birth. This is a PD version you'll find details of elsewhere in this issue, and if you start flicking pages, you'll see exactly what they've added, and what an excellent version of its classic ancestor this really is.



Welcome the Crucible, possibly the most stupidly named theatre in the world.

IT DOESN'T REALLY MATTER, DOES IT?

We can sit here and talk about how various games manage to give an accurate simlation of a sport while others have teams that are difficult to control, but it's all a little academic, isn't it?

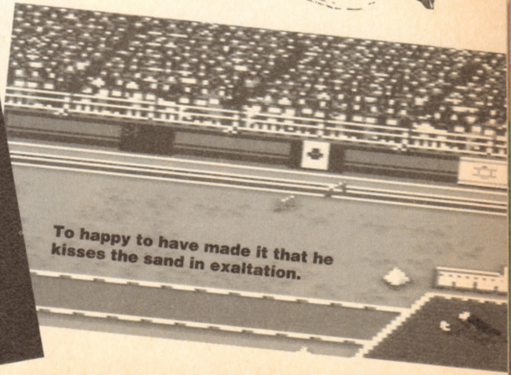
When we're marking games with an emphasis on how realistic they are, it's easy to lose sight of the point of computer entertainment – it is, after all, designed purely to entertain. If a game is good fun, or it's addictive enough to keep you playing for a good few years, does it really matter whether it's a full representation of the original sport?

> *Being good at running has nothing to do with being good at a running game, and being good at football won't alter the fact that your computer team are crap.*

Take One On One, a review of which can be found on page 25. This is not a game about a full basketball team, or even a recognized sport at all – it's a computer simulation of what American kids do when they're bored. It's just fun.

Can you imagine a game of ice hockey with only two people? If you've ever played Mastertronic's Hyperbowl, you'll know that you can have fun with a game that's essentially based on a sport without going through the nightmare of organizing teams, picking the best members, and wading through stats.

In many ways, the games you're playing have mutated sport anyway – you may think you've got an accurate sim when your players are running around a pitch kicking a ball, but all sports are about a hell of a lot more than the game itself; players have to train, managers have to organize, and the team has to be brought together to get them playing in the same direction. Most of this stuff would be boring, of course, but if your favourite football game completely ignores the massive amount that goes on behind the scenes and before the game, why can't ignore a few of the things that go on during the game, if it makes the game you finally buy several times more fun?



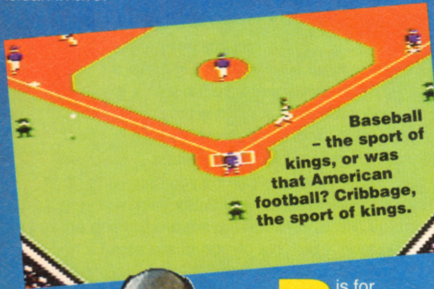
To happy to have made it that he kisses the sand in exaltation.

A–Z OF SPORTS

Learn everything you'll need to know about computer sport. Or just revise your alphabet. It's up to you really...

You know, it takes an expert computer–journo type to know everything there is to know about computer games. Actually, it takes a building full of computer journos who keep ringing each other up in blind panic to know everything there is to know about computer games. If you want to impress your friends with a full knowledge of all things C64 and sporty, you might need to know your alphabet…

A is for Athletics. You remember the games. Maybe you still play them – the games that had you whacking your joystick back and forth with plastic-grinding effort, just to time your runner's stride and beat the computer runners who aren't unfairly slowed down by possibly the most stupid, senseless, and hardware-destroying control system known to mankind, and therefore get to run at reasonable speeds, winning the game every time whilst you're down the shop forking out yet more money for yet another new joystick since the other one snapped clean in two.



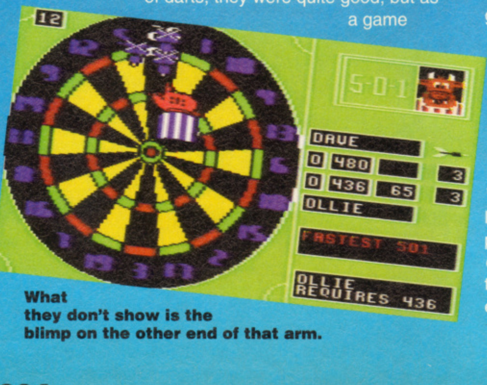
Baseball – the sport of kings, or was that American football? Cribbage, the sport of kings.

Kill yourself on a bike – it's clever.

B is for Baseball, the best simulation of which being *RBI2*, which has always received high marks (84% in issue 30) for its graphics, sound, gameplay, fun factor, and surprisingly for any sports sim, its very gentle blend of statistics and gameplay, as opposed to a management sim or a baseball game sim. Okay, so the emphasis is on the game side of things, but there are still enough numbers to keep propellor-heads happy.

C is for Cricket, a game which produces either very good simulations, or incredibly bad ones. An example of an excellent sim would be *World Cricket*, a game that Hutch holds regular worship meetings for, as its combination of a small amount of stats and reasonably programmed game sections works very well. On the other end of the scale, though, there's *Graham Gooch's World Class Cricket*, which didn't exactly impress any people – fielding has always been a bummer to program, and the one part of any cricket game that everybody dreads. Until this problem is overcome, it looks as if *World Cricket* is alone in its group of good cricket sims. *(Actually, I thoroughly enjoyed Graham Gooch's Cricket and couldn't understand the kicking it got in the reviews. Maybe they were written by people who hate cricket and can't see beyond that to the computer game. – Hutch).*

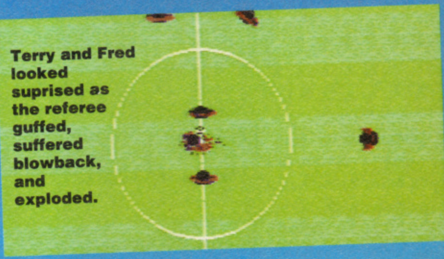
D is for Darts, and thankfully the only two darts sims to make it big – *Bully's Sporting Darts*, and *Jockey Wilson's Darts*. Neither, it has to be said, were very good – as computerized versions of darts, they were quite good, but as a game that's hoping to entertain you for anything over thirty seconds, they didn't really cut the mustard. Of course, you're not reduced to simply playing darts, as all manner of little games involving darts skill end up being included, but at the end of the day, you're just left with that empty feeling deep down inside.



What they don't show is the blimp on the other end of that arm.

E is for Equestrian or horse riding, if you don't happen to have a dictionary handy. It's not every day a different animal makes it into a sports sim (discounting Bully who, as well as being completely crap, is a fictional cartoon character), but because there's a human rider, there's an element of horse-riding that you can transpose onto computer screen. Apart from Horsey-Horsey on the VIC20, the only equestrian game you're likely to find is on the Summer Games 2 compilation pack, and it's, erm, realistic (as are most of Epyx's simulations).

F is for Football and the hundreds of different footie sims to reach the market since the birth of the C64. Of all those that managed to appear, two are still hailed as probably the greatest; *Matchday* (by Jon Ritman), and *Italy 1990* (from Tiertex). These two made it to the top of the pile simply because they're good – the control system actually takes into account the fact that we're human and can't react in 1/50th of a second, the pre-match bits don't contain endless screens of statistics. Probably the best bit is that the whole thing is very easy to get to grips with – the emphasis is placed on football, not moving the player's feet exactly correctly, hitting fire with a millisecond accuracy to carry out a perfectly simple tackle, or being able to watch four things at once. The emphasis is on deciding which way you want to go, and just doing it.

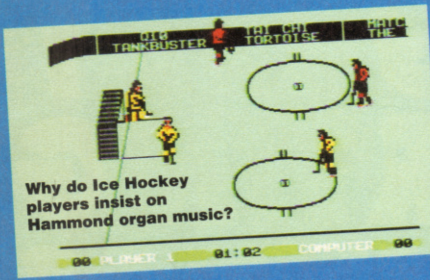


Terry and Fred looked suprised as the referee guffed, suffered blowback, and exploded.

On a slightly sadder note, football games gave birth to the anti-game; the management sim. The idea was that if a programmer either didn't have the talent or couldn't be bothered to write an action football game, they'd write a 'game' based on statistics, management decisions, and just about everything else likely to bore even the most avid football fan to tears. *Match Of The Day* is such a game. It's cack.

G is for Golf, Jack Nicklaus being the greatest, and *Jack Nicklaus Golf* being probably the greatest golf game ever to hit the C64. When you look for a good golf sim, you should be looking for a choice of irons, several courses, stance, power, slicing, fading and spin control. *Jack Nicklaus Golf* has, happily, got most of these. It's only a pity that golf has got to be singularly the most boring sport ever devised by man, really.

H is for Hockey, the icy variety in particular. Probably the only version of this fast, violent little sport ever to make it big was Zeppelin's *International Ice Hockey*, a game which not only featured all the rules of normal hockey, but a few slightly more nice touches in the form of some gruesome little penalties on other versions.



Why do Ice Hockey players insist on Hammond organ music?

I is for Ice skating. No, not the couple whizzing round the ice doing lots of poncy little spins and picking each other up, but the people who look really silly, speed skating in circles wearing a funny hat and wet suit. Funnily enough, like every other sport that's even vaguely cold, this one turned up on *Winter Games*, and was absolutely brilliant.

J is for Judo, a poor second to Karate because its no-where near as violent, and you can't cause half the damage. If you're into passively beating people up then, you'll find the two games well worth getting are *Bangkok Nights*, and *Uchi Mata*.

Welcome to creative dance workshop. Today we're going to be a flower.

K is for Karate and subsequently *International Karate Plus*, probably the best beat-'em-up to come out of that earlier era of gaming. Of course, being incredible and all that, it's still available from The Hit Squad (and probably EDOS), and is well worth getting – it's the original one on one fighting game, that's responsible for just about every other contemporary console beat-'em-up. Get it.

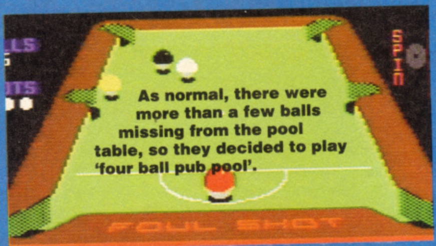
L is for Luge, though God knows why. Let's face it; the sportsman lies on a flat board, and slides down an icy slope. Gravity then carries them around a track, and they belt round at speeds that are not only unnatural, but damned well dangerous. So apart from keeping your balance and not panicking from the terror of the whole hideous experience, the only real talent seems to be in greasing up the bottom of the board. You can find a version of the balancing game on US Gold's *Mega Sports* pack.

M is for Motocross, an insane sport by anyone's standards, involving jumping onto a motor bike and riding over anything that sticks out of the ground. The best (only) two examples of this one are *KickStart 2* and *ATV Sim* (obviously there was a KickStart 1 but it was nowhere near as good). The problem with *ATV* was that it was very slow, boring you with tedium like jumping onto your bike, whereas *KS2* was constant action, coupled with a course designer. I think we can find a winner here…

N is for Nautical, because if fox hunting is a recognized sport, what about the *Hunt for Red October*? It just means that instead of clomping around the countryside chasing after this little fury thing, you can swish around the ocean, blowing up hundreds of people. Fun.

O is for Olympics, a four-yearly event that's coming up again quite soon (1996 to be precise), and shows every sign of spawning its own computer game on the console formats – keep 'em peeled.

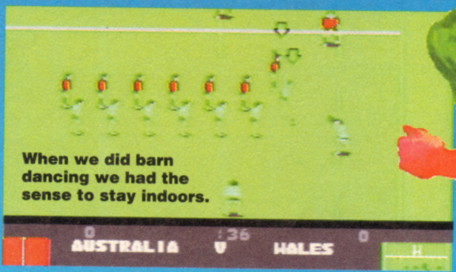
P is for Pool and a game called, funnily enough, *Pool*. Some of the first graphical sports sims to ever appear were snooker and pool sims, as their sheer reliance on mathematics made them the obvious choice to land on a computer. More recently there's been 3D versions of the game, where the table is viewed from a perspective angle as opposed to a boring flat overhead view, but the idea never really caught on with C64 programmers, it seems.



As normal, there were more than a few balls missing from the pool table, so they decided to play 'four ball pub pool'.

Q is for Queensbury Rules, and a simple observation; why aren't boxing games ever any good? They nearly always involved controlling the bloke's feet with the joystick normally, and then trying to control his hands by holding down fire and moving the stick. Let's just get one thing perfectly clear right now. THEY'RE NO FUN. WE CAN'T CONTROL THEM. STOP RELEASING THEM, PLEASE. *(Ermm, Simon, they did actually – Ed).*

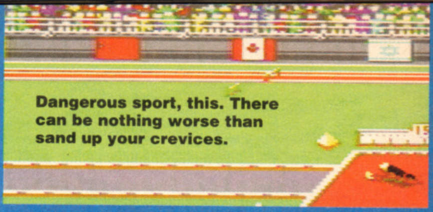
R is for Rugby, the best two sims being *International Rugby Challenge* and *World Class Rugby*, the latter winning by a nose because it was easier to control, slightly faster, and contained an incredibly painless stats section (always a good point). Personally, I think the replacement of the sport with this game should be enforced by law, because forcing PE classes full of bespectacled boys to jump up and down on each other's heads is an odd way to spend your time.



When we did barn dancing we had the sense to stay indoors.

S is for Swimming, so get *Summer Games*. Is it just me, or is this turning into one long Epyx ad?

T is for Track events and the fact that you can find pretty much any track event you need on *Summer Games 1&2*. *(They were in Mega Sports as well – Hutch)*



Dangerous sport, this. There can be nothing worse than sand up your crevices.

U is for Umpires, who never really seem to do anything at all in cricket games. Is that just me, or have you noticed it too? You can get your bowler to make a ball defy the laws of motion, turning moments, and even quantum mechanics, but the umpire just stands there. He doesn't argue or screw up (you can't argue with something that you know is right). Hell, he doesn't even move. Hate 'em.

V is for Volleyball, and just how amazing the Epyx stuff really was, as beach volleyball not only goes where other sport sims fear to tread (into volleyball, for starters), but does it incredibly well.

W is for Weight lifting in a leotard, and looking constipated. If this kind of thing is your bag, you'll want to get hold of a copy of either the *Hypersports* or *Summer Games* compilation packs, as they both contain purple-faced men lifting things.

X is for X Sportsman like Gary Lineker. Now I'm a Leicester man myself (Gary's 'Leicester's favourite son', apparently), but I still can't see the attraction of taking a crap football game, slapping Lineker's name on the front, and flogging the thing for a tenner a time to eager young Gary fans. Is he an ex-sportsman though? I can dream, can't I?

Y is for Yachting but did anyone ever actually do a yachting game? Apparently, the guilty party is the same company that produced Run For Gold, namely Hutchinson. Still, it beats Virgin's attempt at the computer simulation of Branson's transatlantic balloon thingy. Just.

Z is for badly planned features. Ask any computer writer about A-Z guides, and they'll cringe. What exactly are you supposed to find on any topic that begins with Z? Olympic zebra-eating doesn't really work well in a sports feature.

Nice shorts there, boys.

GREAT SPORTING FALIURES

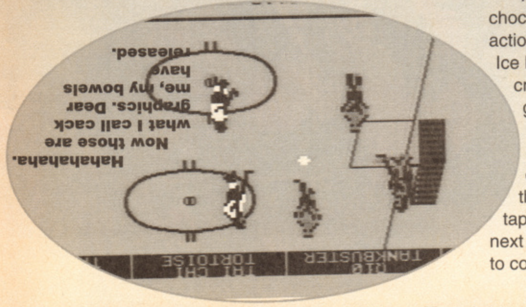
For every Gold Medallist there are 50 who never made it further than the school team. And you can bet that for every stonking sports sims, there's an absolute dog. This is their story...

Nobody ever said that creating a good sports simulation was easy. However, here at the CF offices, we've no sympathy for those evil miscreants who create an evil game and decide to release it anyway. Over the course of its reviewing history, we've come across some truly awful sports games. The software houses might try and hide their cack game away, by bunging it into a compilation pack, but we're not fooled. These are the worst sports games ever.

IT'S A GAME OF TWO HALVES

Football has had more than its fair share of dire games. Just as there are good, bad and Beazer Home League football teams, so there are the strikers, defenders and asthmatic skivers of the games world. Of these, it's usually the management sims which truly suck. And one of the worst of these is Soccer Rivals.

There are some people who get a bizarre pleasure out of jiggling with numbers and even have the nerve to call it gameplaying. Soccer Rivals is one of those games where you twiddle with figures, firtle about with data and then as your big reward see a few farty numbers whizz past. The fact that it all relates to a football team is irrelevant, you could equally be ordering parts for toilet cisterns for all the thrills you get.

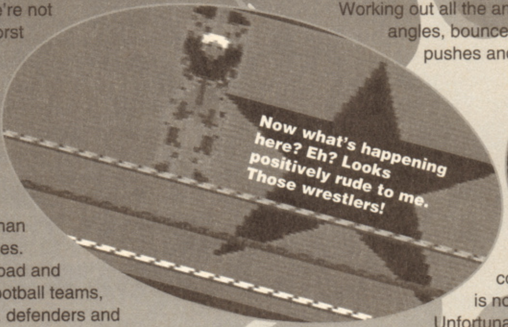


Hahahahaha. Now those are what I call cack graphics. Dear me, my bowels have released.

Jimmy's Super League wasn't much better. It did at least have some graphics, but these were just standard set pieces showing a grizzled commentator and the odd desktop computer/filing cabinet combination. Electrifying it wasn't.

PEAR SHAPED

It was the sheer mathematical problems which meant that 3D Pool would never be any good. Working out all the angles, sub-angles, bounces, pushes and collisions is no mean feat. Unfortunately, this game proved just how hard it all was. It was slow, jerky and impossible to beat. In short it was about as much fun as a red hot poker up the bott.

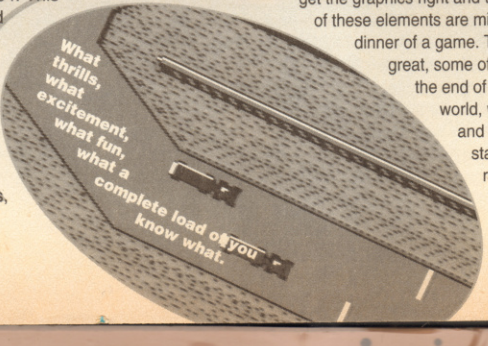


Now what's happening here? Eh? Looks positively rude to me. Those wrestlers!

The problem with Ivan Stewart's Off-Road Racer was slightly different. It wasn't that the concept was bad, or that the graphics were a bit crap or even that it was boring. It was just so ridiculously hard to control your truck – you end up heaving the joystick at your nearest younger relative to release steam. I've seen grown men cry after trying to complete a lap of this game.

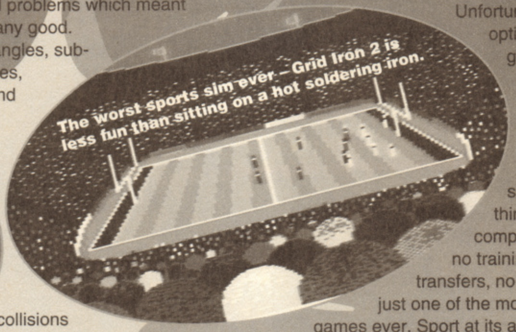
> *It had graphics that looked like they'd been digitised from the Bayeux tapestry...*

Ice Hockey's a tremendously exciting game, chock full of action, scraps, scrapes and end to end action. Unless you happen to be playing International Ice Hockey on the 64. This cruddy game had graphics that looked like they'd been digitised from the Bayeux tapestry, it had next to impossible to control characters, appalling tackling, dreadful sound effects and a tortuous control system. Incredibly infuriating.



What thrills, what excitement, what fun, what a complete load of you know what.

If you bought the decidedly average 4-Most World Sport compilation then you've got your hands on probably the worst sports game ever. It goes by the name of Grid Iron 2. This was meant to be a management sim based around dull 'sport' of American Football. Unfortunately, the few options that the game did have, didn't enable you to change the gameplay at all. You'd have had more joy shouting rude things at the computer. There was no training sessions, no transfers, no diary of events, just one of the most tedious games ever. Sport at its absolute worst.



The worst sports sim ever – Grid Iron 2 is less fun than sitting on a hot soldering iron.

BEYOND GRIM

International Truck Racing sounds like a vaguely interesting game, but it has all the grace of a legless hippo. The programmers must have programmed it in BASIC because the trucks never manage to get out of first gear and slug along like arthritic rocks. Couple this with the fact that the computer controlled trucks gang up on you and you've got a monstrously bland game. There are some sports which are very hard to successfully simulate. Yet software houses still insist on having a bash at them – the results are usually a complete dogs dinner. One of the most popular sports to simulate badly is wrestling. Ever since American wrestling became popular, everyone's wanted a piece of the action.

AN END

Sport sims are very easy to do badly. The games I've listed above prove the point beyond all argument. You've got to get the graphics right and the control system spot on. If any of these elements are missing you'll end up with a dogs dinner of a game. There *are* those games which are great, some of which you'll find on page 22. At the end of the day, in this up and under world, when the onion bag's bulging and the plucky Kenyans aren't in the stadium you'd probably rather play the real thing anyway. CF

My best sports events were cross country, swimming and the 1500m. Ollie's was football and Simon' s was watching from the sidelines.

STEM'S RETRO REVIEW

Captain Stem steps through the time portal and brings back this report from some ten years ago. Phasers to stun...

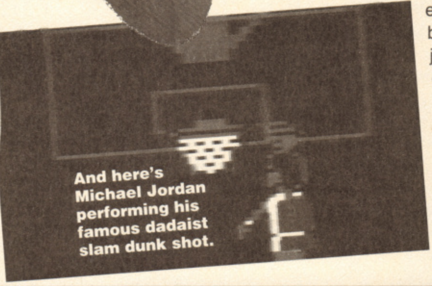
ONE ON ONE

Here's a nice change to a normal team sports game, in the form of one on one basketball. The idea is to take one basketball ring, two people, and a ball. All they have to do is score points. Simple, really.

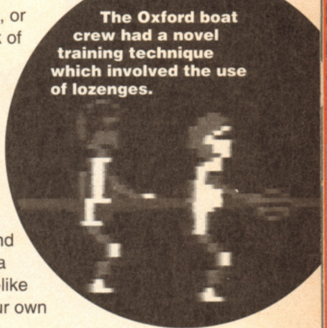
So the two players battle it out, doing all the normal basketball moves with all the normal basketball rules, except for the fact that there are only two people. Dead simple.

Before you actually start, there are lots of lovely options that you can change to alter the way the game works, such as the choice of locations, park, college, and college pro (really difficult), and which of the computer players you want to slug it out with. As well as this, you can select timed or scored game, and which man-outs on each point.

What makes this game so damned memorable, though, are the actual abilities of your player, as not only can they dribble without the ball bouncing weakly off the side of the court whilst everyone laughs, but they really can jump. The variety of different jumps you can do is quite reasonable, letting you fly past the basket and drop the ball in, twist through 180 degrees and then score your point, or just stand at the back of the court and throw from where you start.



And here's Michael Jordan performing his famous dadaist slam dunk shot.



The Oxford boat crew had a novel training technique which involved the use of lozenges.

It's not as simple as that, though, as either player can jump up and snatch the ball either from mid-air or while it's rolling around the top of the ring in a tense basketball film-like fashion, and take your own shot.

For entertainment's sake, there's also the ability to pull the ring clean off the wall on some courts, at which point a little blokey comes along and sweeps up the mess. If a foul is committed, a bloke who looks far too much like Danny DeVito comes along and points at you in a threatening manner.

Altogether, this is a damned nice little game. There's no need to spend ages staring at screens and screens of statistics, just as there's no need to spend at least an hour getting used to the unmanageable control system.

For added fun, there's a two player option, letting you play *One On One* with a friend, or get some practice in against a shop window dummy. All of this means that *One On One* is one of the most enjoyable sports based games seen in a long time, and its graphical polish only adds to the fact that this is an enjoyable and playable little game, well worthy of your joystick's attentions.

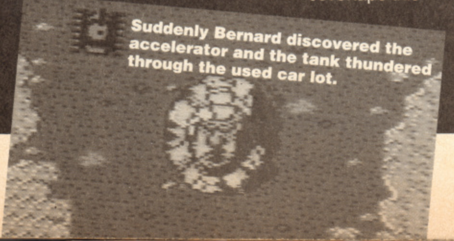
85%

IKARI WARRIORS

Everybody's played a Commando style game at some point – they've run through a jungle massacring hundreds upon thousands of enemy soldiers, and they've had a lot of fun. Ikari Warriors is along almost exactly the same lines, but for a change, this one is interesting – you don't have an incredibly easy stroll through the woods and then get ambushed by 40,000 enemies, with only one bullet to spare.

What we have here is a version of the standard vertically scrolling run, dodge, and shoot affair, with enough extra to keep it sweet – there are larger gun turrets and pill boxes to take out with a handy grenade, helicopters to shoot down, rivers to swim, tanks to destroy, even the odd building to raze to the ground.

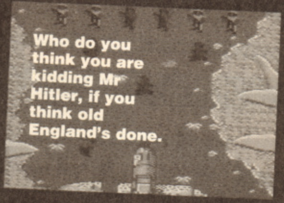
Then again, you'll find Chaos Road on the covertape this month, and probably ask yourself why you're bothering reading the review of a very similar game. Well, there is one very good reason, being that the enemies actually have brains this time round. That's right – when a soldier appears on screen, he won't just run in one direction and shoot you if you get in the way – little groups of them run on the side of the screen, kneel down, and rifle you. Failing that, they'll be foot soldiers using that wonderful tactic of outnumbering the victim 400 to 1.



Suddenly Bernard discovered the accelerator and the tank thundered through the used car lot.

That's not all there is to this lovely little journey through the jungle, though – if you manage to find a tank lying around empty, you can put your Moss Side experience to good use and steal it, running over as many people as you like before the tank gets grenaded by the original owner, desperate to keep his insurance premiums down.

So it's a nice game in principle, but that isn't everything – how does it play? The answer is 'wonderfully'. The control system may get a little difficult to use at times, restricted by the fact that, though you can use either bullets or grenades, there's only one fire button and so the grenades fly when you hold it down. Apart from that small flaw, there really isn't anything untoward about the gameplay, as it's jut constant killing action. The fact that bumping into a soldier will kill you gets a bit much occasionally and the all too realistic 'one bullet and you die' is a bit much too handle when you first start – this is not a game for romping straight through, this is a game for steadily improving on.



Who do you think you are kidding Mr Hitler, if you think old England's done.

So, we've got ourselves a relatively nice little Vietnam (or is it Korea?) game that, above all, is great fun to play. If it couldn't get any better, it just has – this is a two player game, with both Ikari Warriors playing at the same time. The ability to shoot and kill each other is something I'd question, but it all adds to the fun, and the odd competitive game can be refreshing – especially when you're playing against Hutch. *(Thanks Stem – Him).*

80%

Simon's a terribly bad loser, absolutely everyone beat him at One on One. Ermm, except Hutch.

MAINTAINING YOUR 64

Is your equipment falling to bits? Having tape loading problems? Maybe your connectors aren't connecting quite as well as they should. Here's Simon to show you how to take care of your kit...

Have you ever seen casualty? If you haven't, and you suffer from a weak stomach, be thankful, as it involves lots of gore, broken skin, people with bits of metal sticking in, out, or right through them, and tonnes more stuff guaranteed to make you wish you'd never eaten that seafood sandwich half an hour earlier. People wear out, you see, and they get damaged. Bits drop off, other bits sag, things cave in, other bits shrivel up. Your C64 is exactly the same – vulnerable.

The big question, then, is how can you stop all these horrible, torturous things happening to the computer you love (sad case)? With so many wires, boxes, keys, and other fiddly bits, things could get rather difficult. Let's start with a few very basic problems, then.

Our extensive tool-kit for these little repairs consists of a bottle of alcohol and a cotton wool bud. So nip off down to boots, buy yourself a bottle of pure alcohol (don't start getting any ideas – it'd kill you), and a pack of cotton wool buds (the ones that everybody sticks in their ears even though you're not supposed to). The whole lot should only cost you a couple of quid, though if you're really (and I mean really) desperate, and you can't find a chemist anywhere, a teensy sample bottle of vodka should do the trick (vodka always seems to have the best results).

You'd look like a complete Lionel sitting there solemnly trying to stare through a film of laddered tan nylon...

Do be careful, though – if you use any fluid with cleaning agents in, you could risk damaging your equipment, and it could be permanent – you have been warned, so don't do it.

MY TAPES WON'T LOAD

Life's hard, isn't it? You get home after a really hard day, and you just want to crash out and kill a few pixelized people in a burning hell-fire of glory, and you can't load anything. What to do? Most tape loading problems usually occur from dirt and grime. We'd better clean it all up, then, hadn't we?

Next comes the really difficult bit that isn't. Imagine you're loading up a tape, without a tape in the drive, and with the tape hatch wide open – open the hatch (eject), press play, and hit SHIFT and RUN/STOP on your keyboard. Now all you have to do is dip the cotton wool bud (avoiding mentioning brand names, of course) into the alcohol (letting it drip for a while, so it doesn't flood your equipment and start short-circuiting things, hic), and dab it onto two parts of the bits that stick out, shown in diagram 1.

The first part is the read head – all you have to do is make sure that all the muck on it is now on your cotton wool bud. The second bit is a little more tricky – it's that black wheel that's turning quite quickly. The other problem with this bit is that you can't actually see the dirt, as it's the same colour as the wheel – black. A little care should see you through, though make sure you've got all the cotton wool off the wheel before you finish. You could to this with a little help from a finger, but make sure you wash your hands thoroughly before trying, as you'll end up putting more grime onto the wheel than you started with if you don't.

When you've finished all that, you'd be wise to leave your tape deck for at least fifteen minutes (you can turn it off, though), to make quite sure that all the alcohol has completely evaporated, before trying to use it again.

MY ADD-ONS WON'T WORK

Children are running into the streets, fascinated by the day the Earth stood still, then went out to look for a bottle of pure alcohol (help reduce the EEC bottle of pure alcohol mountain). It is said that the entire human population didn't bother with the stuff for the tape

AARGH!

There are bound to be some of you out there who've tried the suggestions on these pages and have got nowhere, still suffering a badly working computer, seriously doubting that I know the first thing about maintaining my C64, and wondering how I ever got this job in the first place (the question has crossed my mind before now). If you're still floundering, and there's something seriously wrong with your machine, your best bet really is to take it to an electronic repair shop – they shouldn't charge to much to fix any problem.

commodore
RECORD
PLAY
REWIND
F.FWD
STOP
EJECT

You should avoid the urge to ask for swabs, scalpels, dabs, pay rises or any other medical thingies while you're performing this delicate operation.

heads, because it meant leaving a nice, warm, cosy house and slogging all the way down to the chemist. You really need it now, so buy it and stop all that whining.

The reason your add-ons don't work on the whole is dodgy connections – edge connectors (see diagram 2) are the worst, so if you have an intermittent fault with your Action Replay, tape deck, handy blender or anything else that plugs onto those odd circuit board strip connectors, they'll need cleaning as well.

There are two levels of edge connector griminess, set down quite firmly by EEC regulation 437:

① – General dustiness or the odd bit of dirt. This one is easily fixed, by first turning your C64 off, wiping the connector with a little bit of tissue paper, then going over it with your alcoholic cotton bud, leaving it for fifteen minutes, and turning it on to find that everything works wonderfully, now).

② – Swamp of despair. This is the 'edge connectors don't shine any more, and the dirt is unshiftable' situation, in which you'll have to nip down to B&Q or such a place, and ask for some really amazingly fine grain sandpaper, explaining that you need to sand the dullness off an important metal surface that's under 1mm thick. Then, with almost no pressure at all, rub the paper up and down the connector until they start to look like metal again. Once you've done this, give it a bit of treatment number one.

Also try to bear in mind that edge connectors have two sides – clean both of them, or all your hard work is effectively useless.

The material they use to create edge connectors gets dull and manky very quickly. This dulls the signal between the computer and the peripheral and leads to dodgy performance. You can rectify all these problems by investing in a piece of extra fine sandpaper.

WRONG PLUG

Oh ick – you've got problems with those little round DIN sockets and things, haven't you? Those are the plugs that connect your power supply, monitor, disc drive, and God knows what else to your C64. There is one thing you could do, before sending the lead off to your local repair shop.

If you take a close look at the plug on the end of the lead (see diagram 3), you'll see there's a little metal bit sticking up, stopping the plastic sheath coming off. If you push this bit of metal down, you can easily get inside the plug, and see if there are any loose wired floating around inside. If there are, then you've found your problem, but if not, you might be looking at a slightly more serious problem – a problem so serious, so grandiose in its straight-facedness, that it's out of the hands of a magazine article, and into the hands of your repairman, along with the sort of cash that folds. Best start saving up now then eh kids? Of course this sort of thing only happens when you're really skint. The living embodiment of sods law.

MANKY KEYBOARDS

It could be jam, honey, pine needles, 2mm high invaders from the planet schnup or your grandad's bottom set all rolling around inside my keyboard. What ever it is, it's a right royal pain in the butt.

For the first, ground breaking technical feature ever, you have a choice of what you can do; either go out and buy a really bloody small hoover specially designed for job, or do as I say (writer laughs, evilly). When you're hoovering (you can work one of them, can't you?), just run it over your keyboard slowly, about half a centimetre away from the keys. Well, you get the idea – it's perfectly safe, but you'd be surprised just how many people didn't do it, and it means typing on a squelchy keyboard, damaging new interesting forms of wildlife and possibly a very interesting alien race if you don't. So get your dustbuster out now and give it a hoover.

Tricky blighter is Johnny lead. You can avoid a serious amount of grief in the first place by treating your leads with a bit of care and attention. Avoid bending them by shoving them up against the wall or by resting TVs on them.

I'M BEGINNING TO GET HEADACHES

Not me, you doink, you, and if you're screen is clean and you still get them whilst sitting at your machine, you can either go out and buy a screen filter, or stretch a pair of your mum's tights over your telly, but go out and buy a screen filter, because you'd look like a complete Lionel sitting there solemnly trying to stare through a film of laddered tan nylon, and I can't write many features on trying to restore your credibility, can I?

AND FINALLY...

If you've got any specific problems with your 64 then write to us here at Commodore Format and we'll see what we can do.

Other topics we'll definitely be covering in the future will include how to mend that supposedly knackered joysticks, how to get a much better picture out of your television, how to restore your 64's case to its former glory, how to amplify the sound which your C64 usually sends out to the TV and all sorts of other wonderful jiggery pokery. We may even demonstrate how to get nuclear fission operating on your TV modulator, how to divert jet airplanes, how to get whites clean without the boil wash, how to stop cats pooing on your lawn, how to invest in futures and how to tell if your neighbours are Mormons. All this and more is yours in a forthcoming issue of the best and only C64 magazine.

IF IT AIN'T BROKE...

Up until her bizarre gardening accident, my grandmother used to bounce me up and down on her wooden knee that she used as a pin cushion (I was only eight months old at the time), and tell me that if something works, you shouldn't try to fix it, and that people never stuck to this rule. Indeed, when CF gave away a free tape head alignment kit, loads of people wrote in claiming that their tape deck worked fine until they tried it, and now it's irreparably damaged, and could they have the money for a new one, please (some people just sent us their repair bills)? We didn't pay a penny – if it worked, why did some total Derek start poking around inside it with a screwdriver?

The same applies to what you've read here today – if you start sanding away at bits of circuit board that were quite happy as they were, thank you very much, we won't take responsibility for your actions. You're on your own, Jim.

SECRET OF SEUCKCESS

More hints and tips from the Slimfast™ king himself, the one and only Jon Wells...

In last months installment we covered the simple basics of getting into our SEUCKed games. This month we'll go one step further - incorporating BASIC into the finished GAMES. This will enable us to use the 64's BASIC programming language to - display better title screens, add highscore tables and end sequences or even incorporate intro sequences, get ready and game over parts.

Basically this makes life a lot easier than using full machine code. Before we start though, you must have the loading hack listings from last month - if you haven't then there's an address later where you can send for a copy.

LET'S BEGIN

First use the hack listing and load in your SEUCK'ed game. Hitting RESTORE will exit you to BASIC, at this point we will now install the BASIC driver. When a FINISHED SEUCK game is saved, the editor is saved with it - but is not used by the finished program. The SEUCK editor is over 20K from locations $6500 - $B680 HEX which is a large waste of memory. If there was only some way to use this memory for extra presentation.

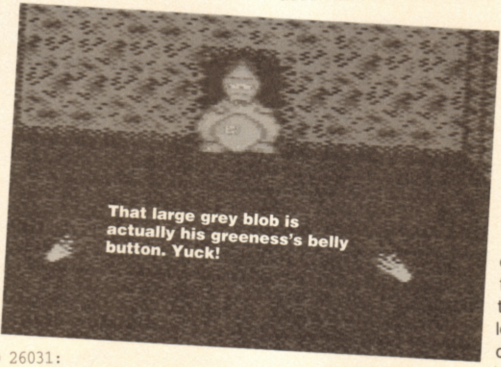
Well, that's exactly what these next few listings are going to do, before we type them in though use this - POKE 21745,87 - what this poke does is move the random fire, from a part in the EDITOR to a part of the main code (Otherwise it won't work properly!).

Now enter and save this listing:

```
5 FOR A=25856 TO 25873: READ B: POKE A,B:
NEXT A
10 DATA 162,0,189,0,9,157,0,105,189,0
11 DATA 10,157,0,106,232,208,241,96
```

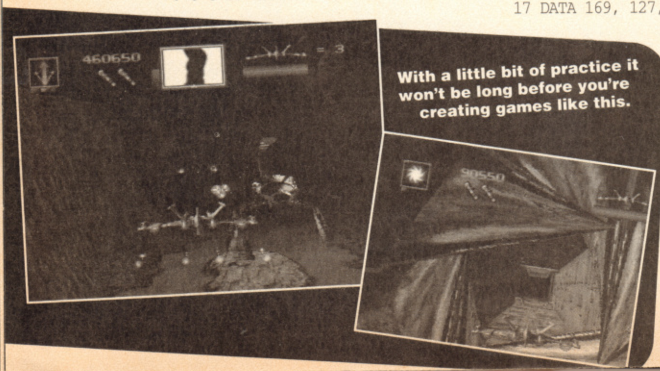
Once you've saved this enter SYS 25858 and type NEW. This gives us a bit more basic space to enter a bigger listing, as follows:

```
5 C=0: FOR A=25856 TO 25983: READ B: POKE A,B
              6 C=C+B: NEXT A
7 IF C<>14464 THEN PRINT "DATA ERROR!": END
10 DATA 169, 0, 141, 90, 94, 141, 16, 72, 141
11 DATA 131, 72, 141, 51, 73, 169, 128, 141, 21
12 DATA 72, 141, 126, 72, 141, 46, 73, 164, 224
13 DATA 141, 91, 94, 141, 17, 72, 141, 22, 72
14 DATA 141, 127, 72, 141, 132, 72, 141, 47, 73
15 DATA 141, 52, 73, 169, 121, 141, 27, 72, 141
16 DATA 122, 72, 141, 212, 73, 169, 122, 141
17 DATA 89, 94, 169, 105, 141, 215, 72, 141,227
18 DATA 71, 141, 187, 73, 160, 11, 162, 0, 140
19 DATA 94, 101, 140, 102, 101, 152, 24, 105,96
20 DATA 141, 97, 101, 189, 0, 37, 157, 0, 133
21 DATA 169, 0, 157, 0, 37, 232, 208, 242, 200
22 DATA 192, 38, 208, 222, 189, 0, 38, 157, 0
23 DATA 134, 169, 0, 157, 0, 38, 232, 224, 128
24 DATA 208, 240, 96
```


That large grey blob is actually his greeness's belly button. Yuck!

Remember to save this listing before running it. Once that's done enter SYS 25856 again. This listing has just relocated all the MAP, COLOUR and BLOCK data over the editor, and also changed the pointers in memory to read this. One final listing to go - we're nearly there. Enter NEW again and then this:

```
5 C=0: FOR A=25856 TO 26031:
READ B: POKE A,B
6 C=C+B: NEXT A
7 IF C<>20475 THEN PRINT "DATA ERROR!": END
10 DATA 162, 0, 189, 0, 0, 157, 0, 225, 232
11 DATA 208, 247, 169, 0, 141, 32, 208, 169, 51
12 DATA 141, 94, 66, 169, 101, 141, 95, 66, 169
13 DATA 96, 141, 0, 65, 32, 211, 64, 32, 3, 96
14 DATA 32, 41, 66, 32, 233, 67, 169, 208, 141
15 DATA 231, 67, 76, 96, 66, 32, 211, 64, 169
16 DATA 129, 141, 13, 220, 169, 240,141, 26,208
17 DATA 169, 127, 141, 13, 221, 169, 151, 141
          18 DATA 0, 221, 169, 63, 141,
           2, 221,169,4,141
           19 DATA 136, 2, 169, 21,
           141, 24, 208, 169
           20 DATA 8, 141, 22, 208, 162,
           2, 189,0,225, 157
           21 DATA 0, 0, 232, 208, 247,
           169, 127, 141, 0
           22 DATA 220, 169, 255, 141,
           2, 220, 141, 7, 220
23 DATA 141, 4, 221, 141, 5, 221, 141, 6, 221
24 DATA 141, 7, 221, 169, 8, 141, 14, 221, 141
25 DATA 15, 221, 169, 55, 141, 18, 208, 169
26 DATA 113, 141, 25, 208, 169, 27, 141,17, 208
27 DATA 169, 55, 133, 1, 88, 96, 169, 127, 133
28 DATA 51, 133, 53, 133, 55, 169, 38, 133
29 DATA 52, 133, 54, 133, 56, 96
```


With a little bit of practice it won't be long before you're creating games like this.

Once this cumbersome listing is typed in SAVE IT, and enter RUN. Enter SYS 26015, which allocates the original MAP locations into BASIC locations, and installs BASIC into SEUCK. From now on you must enter SYS 25856 - which runs your SEUCK game without the normal TITLE SCREEN. If you QUIT or DIE the SEUCK game will return back to basic from where it left off. If you are playing about with one of the FREE games, then enter - POKE 16964,0 - to stop the game from returning to the editor on SPACE BAR. From now on you won't need the RESET RESTORE hack. So enter - POKE 24593,0 - to disable it.

If you're using a two player game then - POKE 16578,0 or 1 - is one or two player respectively. Also in one player mode - you may just notice, that pressing the fire button on joystick player two results with, no second player appearing!

As we no longer need the data listing - NEW the program, now lets check to see how much BASIC memory we've got. To do this type the following:

PRINT FRE(0)-(FRE(0)<0)*65536

If all goes well you should have about 7800 BYTES - that's about 8K of BASIC RAM. More than enough to handle what we want. There's still plenty of memory left from the EDITOR - 5.5K from $A000 - $B680, which we can use for music, and 7K from $6600 - $6900 / $8680 - $A000, which we can use for addon machine code - all of which will be looked at in the future.

You may notice that, in using some of the FREE games - SLAP 'N TICKLE for example, that sections of the background graphics become corrupt. This is because of the KERNAL basic pointers overwriting the chars from 166 - 169. Entering the following FOR/NEXT loop will blank these chars for you; so it won't look so bad:

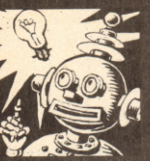
```
FOR A=64816 TO 64848: POKE A,0: NEXT A
```

I'm currently working on a routine to stop this from happening. Lets try a small basic program to get you all off and running. Type in the following and RUN it:

```
1 REM ** TITLE + GAME OVER DEMO **
2 PRINT CHR$(147); CHR$(19); CHR$(5);
3 FOR A=0 TO 200: NEXT A
4 PRINT TAB(2); "MONSTER MASH COPYRIGHT 1993 C-
FORMAT"
5 GOSUB 10
6 PRINT CHR$(147); CHR$(152): SYS 25856
7 PRINT "CURSOR DOWN 9 TIMES"
8 PRINT TAB(16); "GAME OVER"
9 GOSUB 10: GOTO 2
10 PRINT : PRINT: PRINT CHR$(150);
11 PRINT TAB(9); "PRESS SPACE TO CONTINUE"
12 GET A$: IF A$<>" " THEN GOTO 12
13 RETURN
```

TECHIE TIPS

Professor Parquet's able assistant Jason Finch has found a cure for people with 'I Labradors' stickers on the back window of their Volvo estates...



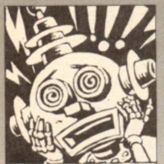
FATAL ATTRACTION

Far too many people have written in with short programs that enable you to play a standard music cassette via the C64 Datassette. The sound that comes out is basically noise, but still it seems people would rather marvel at the C64's stunning feat instead of slipping the cassette into a proper stereo system and being able to hear the music. But the little routine that plays the music has another purpose.

You probably all know roughly how your Datassette works and how tapes store information. Basically, it's all to do with magnetism, and if your Datassette's heads have become magnetised they will not pick up the magnetism from your tapes correctly. This is the cause of a lot of people's loading problems.

Type in and RUN this little program and you will be able to find out whether your Datassette is suffering a long, slow and painful death. If it is, give a Head Cleaning Tape a whirl in your Datassette. The screen should turn green when you RUN the program. If there are any red flecks on it at all, this means your Datassette is picking up some magnetism – perhaps from your TV set or your C64's power unit. The more red there is, the worse your problem. You'll see the effect if you sit your Datassette on top of your TV set or monitor.

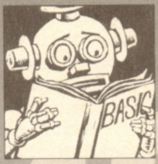
```
0 REM FATAL ATTRACTION BY J.FINCH
1 FOR X=49152 TO 49188:READ Y:C=C+Y:POKE
X,Y:NEXT
2 IF C<>4066 THEN PRINT "DATA ERROR":END
3 SYS 49152
10 DATA 169,011,141,017,208,120,173,013
11 DATA 220,041,016,074,074,074,074,170
12 DATA 173,032,208,041,015,221,035,192
13 DATA 240,236,189,035,192,141,032,208
14 DATA 076,006,192,005,002
```



THE KEY TO SUCCESS

Dear Techie Tips,
I read somewhere that you could see if the RETURN key was pressed down by doing `IF PEEK(197)=1 THEN` whatever.
1 Is it possible to check for other keys in this way?
2 Which numbers go with which keys?
3 I've done a `PRINT PEEK(197)` from BASIC and it gives 64 even if I'm not pressing anything. Exactly why is that?
Michael Hill, Rochdale.

1 Yes, you can check for most keys like that. The only exceptions are the SHIFT, Commodore, CTRL and RESTORE keys. The first three can be detected using PEEK(653).
2 You want a big list? The easiest way is to write a short program that does nothing but PRINT PEEK(197) and the loop back on itself. Press down the keys whose value you want to know.
3 That's like asking why POKE 53280,1 changes the border colour to white instead of red. It just does, that's the way Commodore programmed the machine.



BIGGER BY DESIGN

Dear Techie Tips,
Way back in CF33 you gave a listing that made a smooth scrolling message appear along the bottom of the screen. I was wondering if it is possible to make it two characters high instead of one with the top character normal and the bottom one reversed. This is because I have a double height character set and want to use it with that scroller. Also, could you tell me how I can move it to a different line of the screen instead of it appearing at the bottom.
David Dennis, Canning Town.

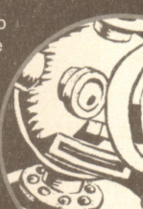
The listing below will give you exactly that scroller, and will automatically change the machine code to display the scroller on whatever line you choose. Change the variable in line 11 to some number between 0 and 23 inclusive to change the line of the screen on which the first of the two line scroller is displayed. There are no error checking routines so make sure the number is not outside of that range; the computer will lock up if you try to do that. The message itself can be as long as you like, and is stored in memory as POKE codes from 49408 ($C100) onwards. Make sure the last byte of the message is a zero byte so that it knows when to loop back.

```
10 REM "BIGGER BY DESIGN" BY
J.FINCH
11 L=10
12 FOR X=49152 TO 49334:READ
Y:C=C+Y:POKE X,Y:NEXT X
13 IF C<>23355 THEN PRINT
"DATA ERROR":END
14 A$="COMMODORE FORMAT ISSUE
43 "
15 A$=A$+"TECHIE TIPS SCROLLER
CODED "
16 A$=A$+"BY JASON FINCH... @"
17 FOR X=1 TO LEN(A$)
18 C=ASC(MID$(A$,X,1))
19 POKE 49407+X,C AND 63:PRINT
CHR$(C);
20 NEXT X
21 SY=L*40+1024:CY=L*40+55296
22 POKE 49167,50+L*8:POKE
49226,66+L*8
23 N=SY+1:AD=49258:GOSUB 38
24 N=SY:AD=AD+3:GOSUB 38
25 N=CY+1:AD=AD+3:GOSUB 38
26 N=CY:AD=AD+3:GOSUB 38
27 N=SY+41:AD=AD+3:GOSUB 38
28 N=SY+40:AD=AD+3:GOSUB 38
29 N=CY+41:AD=AD+3:GOSUB 38
30 N=CY+40:AD=AD+3:GOSUB 38
31 N=SY+39:AD=49312:GOSUB 38
32 N=SY+79:AD=49317:GOSUB 38
33 N=CY+39:AD=49322:GOSUB 38
34 N=CY+79:AD=49325:GOSUB 38
35 PRINT CHR$(147);
36 SYS 49152
37 END
38 POKE AD,(N/256-INT(N/256))*256:POKE
AD+1,N/256
39 RETURN
40 REM
50 DATA 120,169,127,141,013,220,173,013
```

THE ROYAL SCROLL

Dear Techie Tips,
In CF37 the scroller on the Logyk Demo looked familiar; I saw a very similar one in your ClubLIGHT Demo many months ago, also on the Power Pack. What utility have they used to make that scroller? Please give me the name of the utility, price and where I can get it from.
Suhail Sarwar, England.

No special utility was used to produce the scrollers in either of those demos. How do I know? Well, I coded both of them.



Technically they are called 2x2 scrollers because each letter is made up, cunningly enough, of two characters horizontally by two characters vertically. A standard piece of machine language is used to scroll the letters and bring on the new ones. The reason they looked similar was because I liked the clear chunky character set and colour scheme so decided to use them in both demos. The Techie Tips Proggy Selector also has a similar scroller; made different only by altering the colours and character set. Scrollers will be covered in a future edition of the Professor's Surgery.

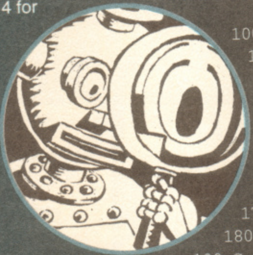
```
51 DATA 220,169,027,141,017,208,169,050
52 DATA 141,018,208,169,255,141,143,192
53 DATA 169,192,141,144,192,169,060,141
54 DATA 020,003,169,192,141,021,003,169
55 DATA 001,141,025,208,141,026,208,169
56 DATA 147,032,210,255,169,008,032,210
57 DATA 255,088,096,000,162,002,202,208
58 DATA 253,173,059,192,009,192,141,022
59 DATA 208,169,066,205,018,208,208,251
60 DATA 162,009,202,208,253,169,200,141
61 DATA 022,208,173,059,192,056,233,003
62 DATA 041,007,141,059,192,176,072,162
63 DATA 000,189,001,004,157,000,004,189
64 DATA 001,216,157,000,216,189,041,004
65 DATA 157,040,004,189,041,216,157,040
66 DATA 216,232,224,039,208,227,238,143
67 DATA 192,208,003,238,144,192,173,001
68 DATA 193,208,012,169,032,162,255,160
69 DATA 192,142,143,192,140,144,192,141
70 DATA 039,004,009,128,141,079,004,169
71 DATA 001,141,039,216,141,079,216,169
72 DATA 001,141,025,208,076,049,234
```

RANDOM TIME

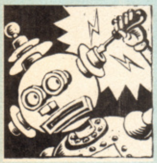
Dear Techie Tips,
I am in the middle of writing a card game in Basic. I have written a routine that will simulate a deck of cards and sort them into order, but it takes far too long when the program is running. It works by selecting a random number from 1 to 4 for the suit and from 1 to 13 for the card and then checks to see whether that card has already been dealt. If it has, it checks another until my array is full, in random order. It's fine at the start but by the time it gets to the 50th card or so, there are so few places left that it can take a while to find a spare slot. Could you tell me how best to do a card dealing routine please?
Danny Calder, London.

The best way to tackle random number tables is to assign consecutive numbers to a big table. So, A(1)=1 and A(2)=2 and so forth. Then go through them and use random numbers to exchange pairs of elements in the array. This way you'll get them all mixed up. If you go through in order and exchange with a random element you will ensure that each one is exchanged at least once. The following program does just that in lines 120 to 160.

However, instead of approaching it from a 1-4 and 1-13 point of view, the routine calculates numbers from 0-51 and then works out what the card should be from that: 0-12 represent the cards in one suit, 13-25 the cards in the next, and so forth. The maths in line 240 may look a little horrendous, but it works.



```
100 REM RANDOM TIME BY J.FINCH
110 DIM C(51):PRINT CHR$(147)
120 FOR X=0 TO
51:C(X)=X:NEXT X
130 FOR X=0 TO 51
140 R=INT(RND(1)*52)
150 T=C(X):C(X)=C(R):C(R)=T
160 NEXT X
170 :
180 FOR X=0 TO 51
190 C=C(X):GOSUB 240
200 NEXT X
210 END
220 :
230 REM WORK OUT NUMBER AND SUIT
240 S=INT(C/13):N=INT((C/13-S)*13+.5)
250
S$=MID$(CHR$(193)+CHR$(211)+CHR$(218)+CH
R$(216), S+1,1)
260 N$=MID$("A23456789TJQK",N+1,1)
270 PRINT N$;S$;CHR$(32);CHR$(32);
280 RETURN
```



INTO THE GROOVE

Dear Techie Tips,
I've been a keen reader of your brilliant section for quite a while now. Reading through issue 35 I noticed a letter entitled MUSIC TO MY EARS. I've enclosed a routine to play music, under interrupt, while you program in Basic. Simply load up the program/game/ demo or whatever and reset it (assuming you have a reset switch, AR cartridge, or equivalent). Once you have reset the program, load up the saved copy of the music player that you should have typed in earlier. Add the relevant data line and run the program. Type `SYS 49152` to start. F1 restarts the tune, and `SYS 49202` stops the music. For any tunes located low in the memory (2048-8192) it's a good idea to move the start of Basic up to 16384 to avoid overwriting the music routine with your Basic program.
Chris Ayres, Victoria, Australia.

Thanks very much for your routine, Chris. Line 21 is the line that contains information about how to initialise the music and how to play it, and obviously changes for different bits of music. The Proggy Selector's music needs the accumulator to be set to zero before the JSR $1000 so make sure you make that alteration if you want to use any music from it. Enter and run the Basic loader below:

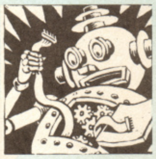
```
0 REM INTO THE GROOVE BY C.AYRES
1 FOR X=49152 TO 49239:READ Y:C=C+Y:POKE
X,Y:NEXT
2 IF C<>10369 THEN PRINT "DATA ERROR":END
3 READ W,X,Y,Z
4 POKE 49231,W:POKE 49232,X
5 POKE 49237,W:POKE 49238,X
6 POKE 49184,Y:POKE 49185,Z
7 POKE 49234,Y:POKE 49235,Z
8 PRINT CHR$(147)
9 PRINT "SYS 49152 STARTS THE MUSIC":PRINT
"SYS 49202 STOPS IT"
10 DATA 032,078,192,120,169,192,141,021
11 DATA 003,141,144,002,169,024,141,020
12 DATA 003,169,037,141,143,002,088,096
13 DATA 173,018,208,201,100,208,249,032
14 DATA 234,234,076,049,234,173,197,000
15 DATA 201,004,208,003,032,078,192,076
16 DATA 072,235,120,169,000,141,024,212
17 DATA 169,049,141,020,003,169,234,141
18 DATA 021,003,169,072,141,143,002,169
19 DATA 235,141,144,002,088,096,032,234
20 DATA 234,032,234,234,032,234,234,096
21 DATA 000,016,003,016:REM PROG SELECT
```

Chris has also supplied some extra DATA lines for various games so why not try giving these funky little codettes a try:

```
21 DATA 0,32,3,32:REM COOL CROC TWINS
21 DATA 0,144,3,144:REM ATA
21 DATA 0,16,3,16:REM BLOCKIE, LUNA LANDA,
VIORIS, CYFORCE1, CF XMAS DEMO
22 REMINDS ME THAT, WHY CAN'T SOMEONE COME
UP WITH A C64 PROGRAM WHICH ENABLES YOU TO
PLAY BACK YOUR CDs. NOW THAT'S A PROGRAM
I'D PAY HANDSOMELY FOR!
```

GOT A PROBLEM?

Jason Finch is more than willing to answer all your technical problemettes, so if your code's in disarray, you've plugged the wrong widget into the jubilee clip or you're having probs getting hold of that rare first edition write to him at Techie Tips, *Commodore Format*, 30 Monmouth Street, Bath, Avon, BA1 2BW. Please remember that Jason *cannot* reply to any letters personally, so please don't include a self addressed envelope. This boxout has been brought to you by Waitorse: *We've got one hell of delicatesan counter.*



WIDESCREEN TV

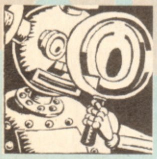
Dear Techie Tips,
I have been trying to work out for ages how to make raster colour splits on the C64. I want to make a "widescreen" effect with two black bars across the top and bottom with the background being the full width of the screen. I need to change the border colour for part of the screen to do this. Could you please list a Basic loader that will do it for me.
James Patterson, Chesterfield.

In order to achieve raster colour splits you need to first set up raster interrupts of course. Then you need to "latch" the raster line at the top of the screen and then again at the bottom, changing the border colour each time. If you take a look at the machine language generated by the following Basic loader, you should be able to suss out what is going on and why. In order to change the colour of the bands at the top and bottom, you will need to do POKE 49192,COLOUR instead of the normal POKE 53280,COLOUR. This is because the routine is constantly changing the contents of location 53280 itself.

```
0 REM WIDESCREEN TV BY J.FINCH
1 FOR X=49152 TO 49243:READ Y:C=C+Y:POKE
X,Y:NEXT X
2 IF C<>11295 THEN PRINT "DATA ERROR":END
3 POKE 49192,0:POKE 53281,11:REM SET
COLOURS
4 PRINT CHR$(147);CHR$(5);
5 SYS 49152
10 DATA 120,169,127,141,013,220,173,013
11 DATA 220,169,027,141,017,208,169,049
12 DATA 141,018,208,169,041,141,020,003
13 DATA 169,192,141,021,003,169,001,141
14 DATA 025,208,141,026,208,088,096,000
15 DATA 000,169,001,141,025,208,173,039
16 DATA 192,073,001,141,039,192,240,025
```

Here's a poser. Can you actually name a single NASA space shuttle crew man? Tough, isn't it.

```
17 DATA 162,013,202,208,253,173,033,208
18 DATA 141,032,208,169,250,141,018,208
19 DATA 076,049,234,234,234,234,173,040
20 DATA 192,141,032,208,169,049,141,018
21 DATA 208,076,129,234
```



STOP INTERRUPTING

Dear Techie Tips,
Firstly I would like to compliment you on a truly excellent section, by far the best in CF. So here come my queries:

1 I am very much a beginner at programming assembly code, and only have the AR monitor to work with. I am trying to write a routine that has two IRQs working "at once" by changing the IRQ vectors within the interrupt handling routine. What am I doing wrong? I have enclosed a simple example.

2 To display text upon the screen, do you have to use something like:

```
>C100 LDA $C900,X
>C103 STA $0400,X
>C106 INX
>C107 BNE $C100
```

or is there an easier way?

3 How do you access the drive and tape deck for "housekeeping commands" and file manipulating in the language?

4 How about an assembler tutorial (to accompany a Power Pack assembler for those not very proficient in the language?)

5 I have enclosed a routine that will flash the border while tape files load, while a Basic program is LISTed and when a disk file is loaded. The border will also change when RESTORE is pressed or when a Basic program stops running.

M.Tweedale, Swansea

1 I'll save some space by not reproducing your listing here, but what you are doing wrong is using SEI instructions within the interrupt itself. You cannot do this as they switch interrupts off. Effectively you are getting into the routine and then telling it to stop the routine and the computer doesn't know what to do when it has stopped it; so it crashes. Take out the SEIs and CLIs from within the interrupt routines and everything will work.

2 You need to do that if you are using screen POKE codes. For ASCII text you can do:

```
>C100 LDA #$00
>C102 LDY #$C2
>C104 JSR $AB1E
```

That assumes your text is at $C200 – load the accumulator with the low byte and the Y index register with the high byte of the address where your text starts. Terminate text with a zero byte. As I said, it uses ASCII codes so you can also give control codes to clear the screen, move the cursor and so on.

3 Take a look back to PUBLIC SECTOR in a recent CF. It used a lot of machine language based file manipulation.

4 Your vote has been registered.

5 Thanks, here is the routine for everyone else:

```
0 REM BORDER FLASHER BY M.TWEEDALE
1 FOR X=49152 TO 49170:READ Y:C=C+Y:POKE
X,Y:NEXT X
2 IF C<>2253 THEN PRINT "DATA ERROR":END
3 SYS 49152
4 DATA 120,169,013,141,040,003,169,192
5 DATA
141,041,003,088,096,238,032,208
6 DATA 076,237,246
```

MOVING AWAY

1 Can you move the cursor around with the joystick? If so, how?

2 In CF36 there was a program that makes the screen glow. Do you have to put line numbers at the beginning of the DATA lines or not? I couldn't get it to work.

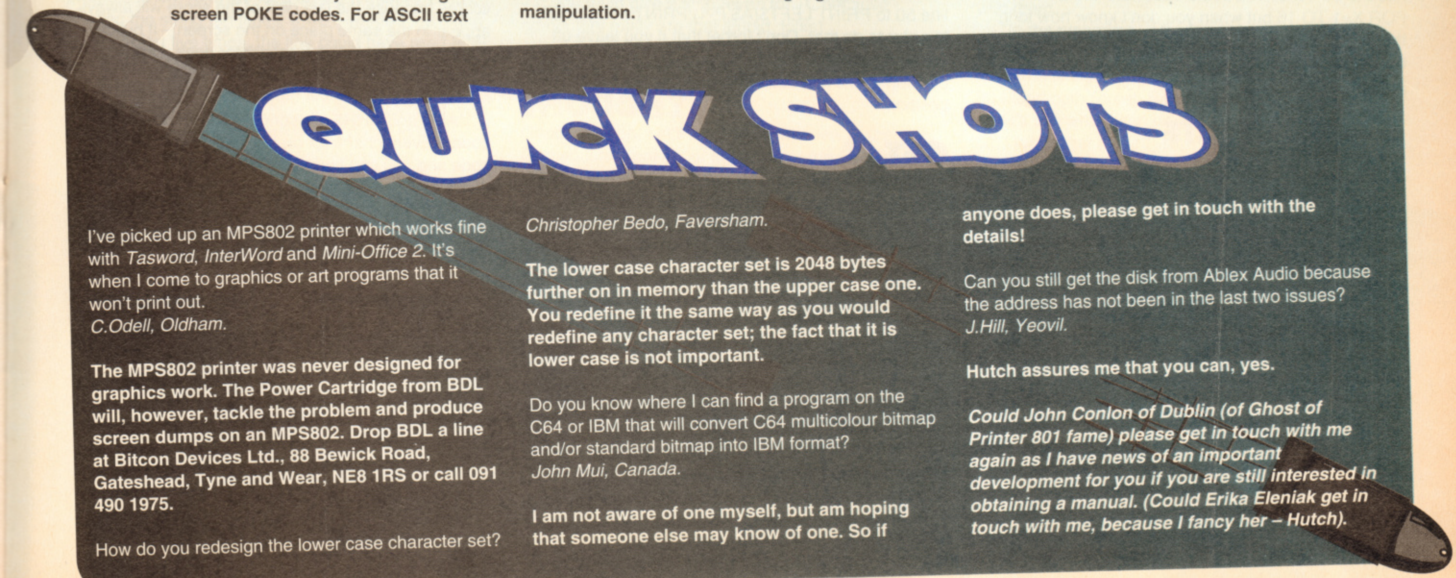
Alex Smith, Essex.

1 Anything is possible, yes. I've written a piece of machine code that uses interrupts to read the joystick. It will then make the cursor move around if you push the joystick – use one connected to port two, nearest the power socket. It uses a very simple method of placing cursor control codes into the keyboard buffer which is exactly what happens when you press one of the cursor keys. It's not the best approach, but it certainly does the job.

```
0 REM MOVING AWAY BY J.FINCH
1 FOR X=49152 TO 49237:READ Y:C=C+Y:POKE
X,Y:NEXT X
2 IF C<>9208 THEN PRINT "DATA ERROR":END
3 SYS 49152
4 PRINT "PORT 2 JOYSTICK MOVES CURSOR"
10 DATA 120,169,068,162,192,141,020,003
11 DATA 142,021,003,088,096,173,000,220
12 DATA 074,144,012,074,144,022,074,144
13 DATA 024,074,144,034,076,049,234,074
14 DATA 162,145,142,119,002,162,001,134
15 DATA 198,076,022,192,162,017,076,034
16 DATA 192,074,162,157,142,119,002,162
17 DATA 001,134,198,076,028,192,162,029
18 DATA 076,052,192,000,238,067,192,173
19 DATA 067,192,201,005,208,206,169,000
20 DATA 141,067,192,076,013,192
```

2 Yes, due to certain problems that have been mentioned in past issues, the lines got joined together in a rather odd manner. Therefore the line numbers appeared at the end of the previous lines, confusing some people. I wouldn't necessarily describe the effect it produces as glowing though. The program should have looked like this (assuming the same doesn't happen again!) *(Actually I've looked long and hard at this listing and it looks perfectly okay to me – Hutch)*:

```
0 REM FLASHING TEXT BY J.SAMPSON
1 FOR X=49152 TO 49197:READ Y:C=C+Y:POKE
X,Y:NEXT X
2 IF C<>6240 THEN PRINT "DATA ERROR":END
3 POKE 53280,0:POKE 53281,0
4 SYS 49152
10 DATA 120,169,013,141,020,003,169,192
11 DATA 141,021,003,088,096,169,133,162
12 DATA 000,157,000,216,157,255,216,157
13 DATA 200,217,157,000,218,157,233,218
14 DATA 232,224,255,240,003,076,017,192
15 DATA 238,014,192,076,049,234
```



QUICK SHOTS

I've picked up an MPS802 printer which works fine with *Tasword*, *InterWord* and *Mini-Office 2*. It's when I come to graphics or art programs that it won't print out.

C.Odell, Oldham.

The MPS802 printer was never designed for graphics work. The Power Cartridge from BDL will, however, tackle the problem and produce screen dumps on an MPS802. Drop BDL a line at Bitcon Devices Ltd., 88 Bewick Road, Gateshead, Tyne and Wear, NE8 1RS or call 091 490 1975.

How do you redesign the lower case character set?

Christopher Bedo, Faversham.

The lower case character set is 2048 bytes further on in memory than the upper case one. You redefine it the same way as you would redefine any character set; the fact that it is lower case is not important.

Do you know where I can find a program on the C64 or IBM that will convert C64 multicolour bitmap and/or standard bitmap into IBM format?

John Mui, Canada.

I am not aware of one myself, but am hoping that someone else may know of one. So if anyone does, please get in touch with the details!

Can you still get the disk from Ablex Audio because the address has not been in the last two issues?

J.Hill, Yeovil.

Hutch assures me that you can, yes.

Could John Conlon of Dublin (of Ghost of Printer 801 fame) please get in touch with me again as I have news of an important development for you if you are still interested in obtaining a manual. (Could Erika Eleniak get in touch with me, because I fancy her – Hutch).

PROF'S SURGERY

How long's a string? The Professor knows...

MEET LEN

LEN is a Basic command for finding out the length of a string; the number of characters that are in it. For example, if you had A$="SOCCER", then PRINT LEN(A$) would give 6. Dull but true. You can also do things like PRINT LEN(A$+B$) and, if you're feeling silly but adventurous you could always give PRINT LEN(LEFT$(A$,4)) a whirl. LEN can be used in conjunction with MID$ for some very useful tricks. For a start you may want to search through a string for a particular character, like the letter F. I don't know why on earth anyone would actually want to search for just the letter F, but it's only an example, after all. Try this:

```
10 A$="AMERICANFOOTBALL"
20 FOR X=1 TO LEN(A$)
30 IF MID$(A$,X,1)="F" THEN PRINT
"FOUND AT POSITION";X
40 NEXT X
```

When you run that incredibly exciting program, you should get the result FOUND AT POSITION 9 printed on your screen. This is because LEN has been used to work out how many checks need to be done. You could substitute line 20 with FOR X=1 TO 16 but when you don't know how long the string is, you must use LEN. The MID$ command is then used to extract each letter in turn – it starts at position X and takes 1 character from A$.

A BIGGER BITE

You may want to check out, say, the three characters that came before the F in the string. All you need to do is take note of where the F occurred and then use MID$ to extract what you need. So amend the program so that it looks like this:

```
10 A$="AMERICANFOOTBALL"
20 FOR X=1 TO LEN(A$)
30 IF MID$(A$,X,1)="F" THEN P=X
40 NEXT X
50 PRINT MID$(A$,P-3,3)
```

Now the variable P will hold the position number for the last letter F in A$. Line 50 subtracts three from this and then takes the next three characters starting at the position calculated. Remember the letter F is found at position ten. Three from this is position seven. The three characters starting there are "CAN" and that is what should be printed. To take the three characters after the letter F you would change line 50 to PRINT MID$(A$,P+1,3). You could even split the string into two strings with everything before the letter F in one string and the rest in another. Try changing line 50 to PRINT LEFT$(A$,P-1):PRINT MID$(A$,P) in order to do that. Don't forget that if you leave off the last number in the MID$ command, it starts at position P and just uses everything to the right of that position.

GET IT

A very useful command for building up strings is GET. It reads characters from the keyboard. For this example, remember that CHR$(13) is the computer version of "the RETURN key".

```
10 W$=""
20 GET A$:IF A$="" THEN 20
30 IF A$=CHR$(13) THEN END
40 W$=W$+A$
50 PRINT A$;
60 GOTO 20
```

Line 10 clears out W$. Line 20 uses GET to read the keyboard and stores what it finds in the variable A$. If nothing was being pressed, A$ would be the empty string ("") and so it would loop back until something occurred. Line 30 checks to see if the character it has read into A$ is the code for the RETURN key and ends the program if it is. Line 40 takes the original contents of W$, adds the character in A$ on to the end of it and assigns it back to W$. Lines 50 and 60 print what was pressed and loop back for more. GET will only read one character at a time.

NUMBER 5 NEED INPUT

Another way to read from the keyboard and store the result in a variable is using the INPUT command. The format for doing this is shown in the following slim-line program:

```
10 INPUT "WHAT IS YOUR
NAME";N$
20 PRINT "HELLO ";N$
```

INPUT will always print out a question mark after the text, or just a question mark if you do something like INPUT N$. You have to press the RETURN key after typing what you want. The disadvantage of using INPUT is that you cannot control from within the program which keys register. With GET you can limit things to just the letters, or just the numbers, and so forth. With INPUT, the user can mess everything up by clearing the screen, deleting the question, changing colours and generally causing havoc.

COMMAND PERFORMANCE

There are a few other commands associated with strings, namely VAL, STR$, ASC and the one you've already met, CHR$. VAL is the opposite of STR$ and ASC is the opposite of CHR$. For example, to convert a string variable into a numeric variable, you use VAL. To do the opposite you use STR$. The following few lines demonstrate some uses for STR$:

```
10 A=12345
20 PRINT "A=";A:PRINT "A=";MID$(STR$(A),2)
30 PRINT TAB(30-LEN(STR$(A)));A
40 PRINT RIGHT$("000000"+MID$(STR$(A),2),7)
```

Note how the space disappears when STR$ is used with MID$ in line 20. Line 30 is useful for displaying scores because the last digit of the score will always appear in the same place on the screen – it builds numbers up much like a calculator does. Line 40 shows how to use a fixed size for a score or something, padding the beginning with zeros.

ASC and CHR$ are concerned with character codes. Every character on the keyboard has its own code and you can find these out by doing PRINT ASC("A"), for example. That will print 65. PRINT ASC("0") would give 48. As CHR$ is the opposite, PRINT CHR$(65) will give you a letter A. A space is CHR$(32).

NEXT MONTH

That's it for strings but if you've got any follow-up questions, just drop me a line. Next month we're going to be looking at starfields and how they are made.

BACK TO BASICS

Are you tired of just loading up different games? Do you want slightly more from your machine? Simon shows you the BASICs...

Loops are fun things. Last month, we took a look at some loops that just spin round until you decide to stop them. Now it's time to create some slightly more useful loops. Let's not waste time wibbling, though – you could type in the following program instead:

```
10 FOR a=1 to 10
20 PRINT "STILL COMMODORE FORMAT"
30 NEXT a
```

You could even run the program as well, using the RUN command, if you really wanted to. Those of you who took that option should see the words STILL COMMODORE FORMAT printed on your screen 10 times. Try this next program:

```
10 FOR a=11 to 20
20 PRINT "NO
CHANGE YET"
30 NEXT a
```

Congratulations – you've just completely wasted your time, and created another loop that acts in almost exactly the same was as the first example. You see, it all depends on the numbers you put in the first line:

```
10 FOR a=start TO end
```

This command, in collaboration with the NEXT command in line 30, runs everything between the two lines (in this case only line 20) the number of times it has to in order to get start to equal end. The second program, then, runs the loop on the numbers 11 to 20, printing the string ten times. If we'd wanted the string to be printed five times, the line could have read FOR a=1 to 5, FOR a=6 TO 10, or FOR a=21 to 25.

In case you're wondering, the a in lines 10 and 30 is a variable. If you aren't sure what a variable is, you can find a boxout elsewhere on the page. In the meantime, we're going to try something else:

```
10 FOR n=1 to 10
20 PRINT n
30 NEXT n
```

Because n is a variable, we can view the contents of it throughout our loop. This means that this program will print the numbers from 1 to 10 on the screen. It's boring, but when you get further into BASIC, this variable loop will prove itself to be invaluable. We can take this further, though. Try replacing line 10 with:

```
10 FOR n=10 to 1 STEP -1
```

And before you know it, that writer slips another keyword by you at twice the speed of sense. It's still quite straightforward, though – the extra bit does exactly what it says, stating the steps the loop has to move n in. For instance, if we wanted all the even numbers between 0 and 20:

Congratulations – you've just completely wasted your time,

```
10 FOR n=0 to 20 Step 2
```

Or every third number between 1 and 30

```
10 FOR n=1 TO 30 STEP 3
```

But we might want to count in halves, backwards, from 3.141:

```
10 FOR n=3.141 to 0 STEP -0.5
```

All you have to remember is that for absolutely any step size, be that positive or negative, other than +1, you must give a step (even for -1, because computers really are that stupid, folks).

WHAT USE IS ALL THIS, THOUGH?

Good question. Let's take a look at a few of the Gamebusters pokes, or in particular the Executive Leaderboard poke from page 38 of last issue. If you can't find that one, don't worry, as you'll find a similar line in nearly every poke, but the bit we're interested in is:

```
1 FOR X=272 TO 331:READ
 Y:C=C+Y:POKE X,Y:NEXT
```

It'd help if we went through it command by command:

```
FOR X=272 TO 331
```

Starts off the loop, with X at 272, stopping it when it reaches 331.

```
READ Y
```

You don't really have to worry about this command just yet, so just remember that it takes a byte from the DATA statements later in the program.

```
C=C+Y
```

This instruction isn't directly related to the poke bit – it adds together every number it comes across, so the total can be checked at the end to make sure you've typed in all the DATA statements correctly.

```
POKE X,Y
```

And here is where the actual poking is done, poking the address held in the variable X with the value held in the variable Y.

```
NEXT
```

Because there's only one loop, the variable letter needn't be stated. In fact, there aren't really many instances in which it'd be imperative to state the variable, but it's always wise to do so, as it makes bug hunting about a million times easier.

CHEERIO

And there we have it – by now you should have a fairly firm grasp of the principles of loops. As a little taster for next month, you might like to try this:

```
10 PRINT "I KNOW THAT YOU KNOW THAT ";
20 GOTO 10
```

Remember to include the last character on line 10, by the way, and see what happens – this is a method of joining strings of text (or anything, really) together. Next month, you see, we'll be dealing with strings of text, and all the wonderful things we can do with them.

In the meantime, if there are any aspects of BASIC that you're having trouble getting to grips with, just write to Back To Basics at *Commodore Format*, 30 Monmouth Street, Bath, Avon, BA1 2BW, and I'll see what I can do. Right, now where did I leave that nested loop?

VARIABLES

What exactly is a variable, then? They've cropped up already in this tutorial, and they're the fundamental thingy behind BASIC programs, but you don't know what they are. Let's take a look at some numbers: 4, 3.5, 9, 65536, n, 17

Notice how I slipped one in there, completely unnoticed? The truth of the matter is that a variable is like a normal number in almost every sense, except from the fact that it can hold a variable number (an elastic value). If we wanted to assign the value 4 to n, we would use:

```
LET n=4
```

And if we wanted to double the value, we could use something like:

```
LET n=n*2
```

Or if we just wanted to add 7 to our variable:

```
LET n=n+7
```

So if we combine all of this with our loops in a heavy way, to work out thew sum of all the numbers from 1 to 10:

```
10 LET t=0
20 FOR n=1 to 10
30 t=t+n
40 NEXT n
50 PRINT t
```

As a matter of fact, you've just learnt something else – that we can print variables to the screen in the same way as we could normal text, except that this time we have to leave off the "speech marks". This lets the C64 know that it isn't actually text in the first place at all.

Also bear in mind that though I've stuck to single letter variable names, you could have variables called 'Billy', 'Mike', or whatever was convenient, just so long as they don't contain any spaces, and they aren't the same as any keywords (you can't call a variable 'print', for example).

DEAD EASY SCROLLS

Fancy learning the secrets of funky 8-way full colour scrolling? Our technical bod, Paul Black has got some very good news for you all...

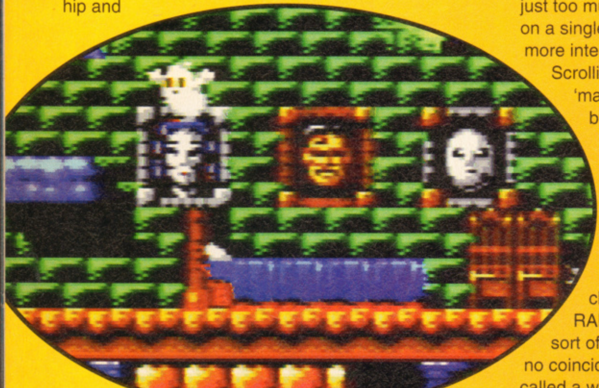
Flight simulators require lots of processor time and look crap with dodgy scrolling.

In the last article I took a quick look at sprite multiplexing. Multiplexing is a good technique that can be used to pull down the eight sprite barrier of the '64s hardware. This time I'm looking at scrolling and how to achieve this using large maps with a good tried and tested game compression technique that's easy to get to grips with, but very effective especially when used in conjunction with scrolling. There's three main areas I'll cover, how to scroll the screen and some limitations of the processing involved, how we can build large maps that seem to expand the memory of our machine, and finally to pull this together there's a pretty extensive program that uses the techniques discussed. To start off lets talk scrolling.

WHAT IS A SCROLLER?

Static screens are fine if the scenario lends itself well to the restriction of the physical size of a single screen or you may even flick screens to progress around your computer world. When you're watching films you'd cringe, get confused and lose interest if the camera kept flicking between views, so use a scroller be cool, hip and keep everybody happy.

A scroller routine is usually written in machine code for speed, it basically enables you to display an area of a map most often called a window (onto the map). The benefit of scrolling is that the player can interact more naturally with the play area and it also gives the impression of reality and the increasingly important presentation factor, scrolling gives an heir or professionalism that, if done well simply looks good.



Uncle Fester looks on gloomily at his wallpaper and resigns himself to a spot of redecorating.

HOW IT'S USUALLY DONE

Most shoot–'em-up type games use some sort of scrolling background, the landscape smoothly appears revealing the next wave of mutants. Other types of game use scrolling for practical purposes (there's just too much information to display on a single screen), even boring old utilities are more interesting when stuff scrolls up the screen.

Scrolling is achieved by altering the view of the 'map' that we see. For example a map of say 2 by 2 screens may be displayed using only a portion of 1 screen 40 across, by 20 characters down.

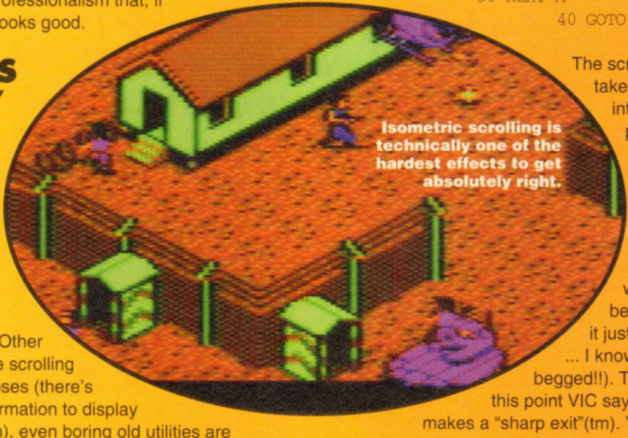
Usually the map is stored entirely in the computers memory, if its a character based map then this is stored character by character. So a map of 2 screens by 2 screens wide (40 by 25 characters per screen) uses 4000 bytes of RAM. All scrollers display a portion of the map, sort of like looking straight through a window, it's no coincidence that visible portion of a map is often called a window. Scrolling is achieved by altering the position of the window relative to the map.

The illusion of scrolling is achieved by displaying a slightly different portion of the display near the original (ie. vertically, horizontally or a combination of both in diagonal scrolling). The only drawback of moving a character at a time is that we'd be moving the display window in characters 8 pixels a go, which doesn't make for the smoothest of scrolling by any stretch of the imagination. The answer... alter the view in pixels rather than whole characters, but how do we do this with a screen of characters that can only be placed in columns of 40 across by 25 down?

The answer lies in the '64s hardware, that good old video chip (VIC, not a jolly as Mr Reeves, but a hell of a lot more useful). VIC can alter the '64s screen position horizontally and vertically by anything from 1 through 8 pixels. Thus we can more the screen in any of the intermediate positions before we reach the character seem. Therefore the new sequence of events is: display the initial window, increment or decrement the screen position until we reach the character seem, then redraw the window (at a new position) and reset the screen scrolling registers (this character 'seem' thing is the point where we can't move the screen any further using the video chips registers, so we're forced to shift the screen data character by character).

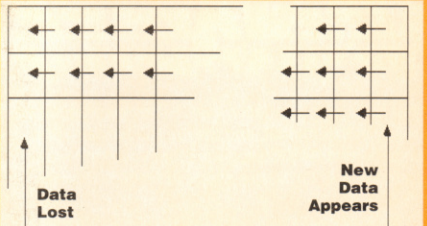
The '64 has the ability to move the screen in pixels using two registers, $D011 for Y and $D016 for X movement. These registers aren't dedicated to scrolling so we've got to watch what we're doing, setting only the bits that interest us, these happened to be the first 3 or bits 0, 1 and 2. The following BASIC code illustrates the use of these registers by moving the screen up and down, its crude but gives you an idea of the whole scrolling thing.

```
10 FOR A = 1 TO 7
20 POKE 53270,200+A
                  30 NEXT A
                        40 GOTO 10
```

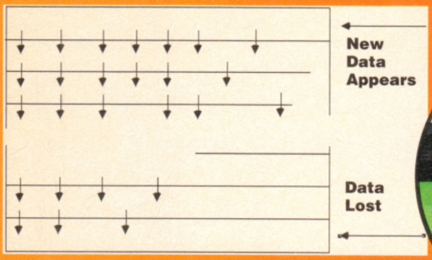


Isometric scrolling is technically one of the hardest effects to get absolutely right.

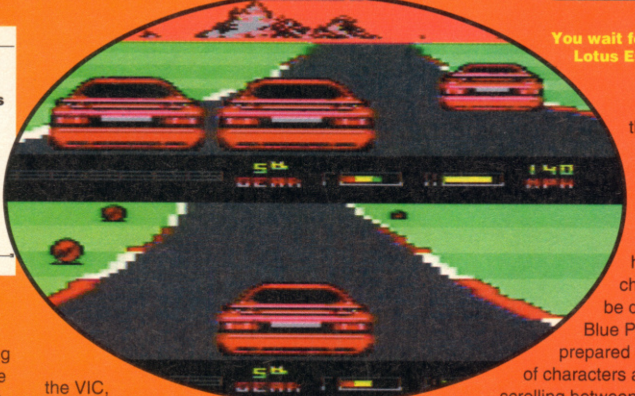
The scroll register takes care of the intermediate positions, but can't be persuaded to move the characters that form the display as well (I would be very nice, but it just does do this ... I know I've begged!!). Therefore at this point VIC says sorry and makes a "sharp exit"(tm). Your program will have to do the rest... There are two basic directions we can scroll, horizontally and vertically. Horizontal scrolling, is accomplished by shifting the contents of each line either left or right depending of the direction of the scroll.



Here's a flow chart for horizontal scrolling on a standard screen.



And this is a flow chart for vertical scrolling.



You wait for ages and suddenly four identical Lotus Esprits come along together.

From the diagram above, notice the effect of scrolling the screen, both horizontally and vertically, these are the loss of data at the end of the screen and the gap created for new data at the other. The easiest way around this is to 'wrap' the screen data from start to finish, thus data leaving on the right appears of the left. This isn't really all that useful to us, we want new data. The effect of scrolling a landscape etc is done by introducing the next bit of the picture in the gap at the head of the scroll -we just keep putting more of the picture in there until we're at the end of our picture or want to stop. Scrolling the screen vertically is just as easy, we just shift entire lines up or down. There are several 'rules' that should be followed religiously when you're scrolling the screen, namely:

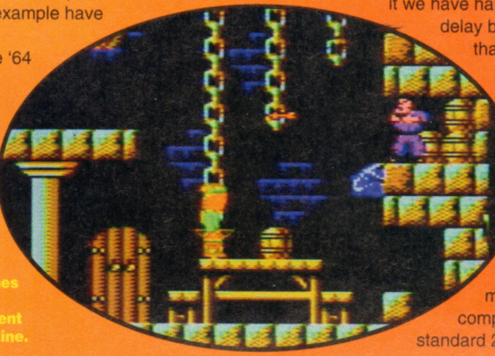
1. Always move the data starting at the 'end' of your scrolling window. If you don't the next character to move will be overwritten by the previous move and your scrolling will look a bit odd to say the least!
2. Raster interrupts are the only way to achieve silky smooth scrolling on the '64. Update must be constant (ie. every raster) and the speed of scrolling must also be smooth, eratic scroll frames of 1 pixel, plus 3 pixels, plus 2 pixels result in jerky movement (unless the scroller uses some kind of momentum, but be careful to ensure that this has smooth transitions between different speeds).
3. Sometimes in the heat of it, games will tend to have masses of objects moving about simultaneously, take into account the machines processing power, don't over-do-it, or you'll suffer from the consequences of slow motion city... or worse a night at the flicks!

Animating objects in 3D takes a lot of maths. Not for the faint-hearted I'm afraid.

Using the hardware to move the screen in pixels is much easier and faster than doing this process by software alone, but never the less many machines are forced to do so, the Spectrum and Atari ST for example have no hardware scrolling. The '64 was lucky in that the designers saw fit to include scrolling the facilities of the VIC, dead useful, if they hadn't just think how many games might never have existed or far worse the '64 might never have achieved such popularity.

As a point of note, other scrolling hardware around such as Nintendos' (the NES version, acknowledgments to copyrights, trademarks etc) allow the screen to scroll a whole screen worth, before it reaches the 'end'. This is because its screen is really a window on a 2x2 screen that can be positioned anywhere, it even wraps around the edges! This allows the programmer to introduce more data in the hidden part of the 'screen', making scrolling so much easier (console programmers have an easy life, with all that dedicated hardware, makes you spit really doesn't it).

In a nutshell we can scroll the screen using two methods, completely software driven or hardware assisted. By assisted I mean that the hardware has some facilities to help out, but they still need a fair bit of coding to get a decent screen scroller routine ticking over. The 'all software' method gives more control over the display, but needs plenty of processing power and memory, something that we '64 owners just don't have to be honest, so forget it.



Some platform games don't need a terribly efficient scrolling routine.

Anyway back to reality... Smooth scrolling is most always achieved using raster interrupts, updating the display while the raster is off the screen to avoid flicker etc. When we display a window, valuable processor cycles are being used, and before we know it we have hardly any raster time left (that's the delay between screen refresh), and to top that we haven't even considered colour yet! This is a major design problem with scrolling games, we must make decision like ... "should we go the whole hog and scroll colour or just character data?". Even scrolling characters only takes a fair amount of processing on the '64, the reason, a processor speed of a mere one million cycles per second, by comparison to today's machines of standard 25 to 40 million, the '64 is slow.

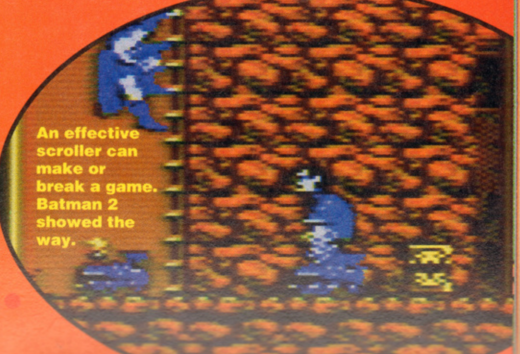
A window with colour, other than the four basic screen colours, takes at least twice as much time to display, but as with any problem a little compromise has many a benefit. If we limit the speed of scrolling and ensure that moving diagonally both horizontal and vertically we cross the character seem simultaneously it can be done ... in the tradition of good old Blue Peter, its a case of here's one I prepared earlier. First we display a full screen of characters and colours, then while we're scrolling between seems the next window position is secretly built. When the time comes to cross the character seem we dump colour information into the colour RAM and switch in the screen we made earlier. If this all sounds a bit simple, then your dead right, but as always the simple ideas are definitely the best (or at least easiest to understand). The only trouble left is implementing the idea on the '64... (as luck would have it I've done that one for you, luck so-and-so s).

HOW TO INTRODUCE DATA.

There is still a small niggle in our scroller design that needs attention namely the map storage. If we want a good size map of say 4 by 4 screens, then we'll lose nearly 16K of the '64s precious RAM. Again a little thought and we come up with the answer; compress the map data. This means that we'd have our map in a form that takes less memory, but would allow us to get at the data when it's needed, ie. when the screen scrolls and leaves a gap for more of the picture. Easier said than done, no not really... there are many techniques available that can be used to compress data, simple algorithms such as RLE (run length encoding) and not so simple ones such as Huffman coding. While these methods are generally good at squeezing a large volume of data into a small space (such as between Mr Blobbys' ears), they don't really lend themselves all that well to scrolling because of the time it takes to run them. What's needed is a simpler and therefore faster method to store more information in that small space. If you've ever used the shoot–'em up construction kit (tm) you're already familiar with the technique we'll use... data blocks the way forward...

SCREEN PACKING...

Reducing the amount of memory a map will occupy involves issues such as dimensions (how big does it have to be), whether we want or need to include lots of colour, are we satisfied with character graphics or do bit-mapped graphics lend themselves more to the project in hand, and finally the big one... is this screen going places, or in other words, will it scroll?



An effective scroller can make or break a game. Batman 2 showed the way.

If you're close to tears because you can't finish that game or simply because you want to do better, read on. We are the gamebusters...

GAMEBUSTERS

ZAMZARA

(RACK-IT)

Here's some tips for this classic budget alien shoot 'em up. From the start: go RIGHT, UP into the exit, RIGHT, collect genes, UP into the exit, RIGHT, collect genes, UP into the exit, RIGHT, collect weapon, go UP into the exit, RIGHT, collect genes, UP into the exit, RIGHT, collect genes and weapon, go back LEFT and UP into the exit, RIGHT, collect two genes, UP into the exit, LEFT, collect genes, UP into the exit, LEFT, collect missile, UP into the exit, LEFT, collect genes, RIGHT, UP into the exit, RIGHT, collect weapon and genes, UP into the exit.

RIGHT, UP into the exit, UP into the exit directly above you, RIGHT, collect weapon, LEFT, DOWN through door you came in through, RIGHT, go UP into the next exit you reach, RIGHT, collect genes and weapon, LEFT, DOWN into exit you came in through, collect genes, RIGHT, DOWN into exit, RIGHT, collect genes and weapon, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, collect weapon, UP into exit, RIGHT, collect missile and genes, UP into exit, RIGHT, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, DOWN into exit, RIGHT.

Collect GENES and weapon, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, collect genes, DOWN into exit, RIGHT, kill devil with missiles, DOWN into the exit to complete the game.

Ride a cock horse from Banbury Cross. Ermm, yes.

FUTURE KNIGHT

Not content with our sprawling player's guide? Can't use the Action Replay POKEs? No luck with the listing? Fear not, here is a very simple cheat for even the most incompetent dweebs.

On the title screen, hold down the keys B, U, G, 8, and 7. The border will turn grey, and the FUTURE KNIGHT logo will now say FUTURE CHEATS. You can now start the game with infinite lives (but a constant score of zero sob!).

JOCKY WILSON'S DARTS

And here's another handful of top-notch tips for this 'rather boring Saturday night at the pub' simulator.

Mastering the controls: The main problem in this game is that Jockey seems to be drunk, and thus his hand is very unsteady. His hand moves and then stops at regular intervals, so only throw a dart when it has stopped and not when it is moving.

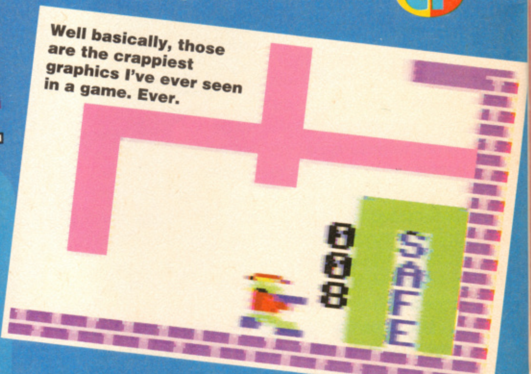
The dart will land roughly a dart's height above the throwing position *(What? – Ed)*. Round the clock: In this game you must hit the numbers from 1 to 20 in order, in as fast a time as possible. There are no points to be scored, just the fastest time, so it makes more sense to aim for the outside of the ring where there is the largest area to hit.

COPS & ROBBERS

Apart from pressing F1 and F4 to start the game fast or slow, you can also press F2 or F3 for average speed too.

VIRTUA RACING

Basically don't get involved with this game at all. You see it costs £80 and we reckon that that's about £65 too much. The Commodore 64 posse have got a small message for all you sad console owning chumps – SUCKERS – bet you can afford *loads* of games at that price. Ha! CF



Well basically, those are the crappiest graphics I've ever seen in a game. Ever.

ACTION REPLAY POKES

More sumptuous and downright scrummy Action Replay POKES courtesy of my old mucker Warren 'WAZ' Pilkington. To use them, freeze the game, press 'E' to enter the POKEs, then 'F3' to restart the game.

JOCKY WILSON'S DARTS

POKE 34884,96 – Stop player 2 winning
POKE 35241,0 – Infinite time

I.O.

POKE 25117,189 – Infinite lives
POKE 27018,169 – Invincibility
POKE 24969,0-3 – Starting level
POKE 25122,90 POKE 26122,125 POKE 26163,162 – Press Q for orbs

MONSTER MASH

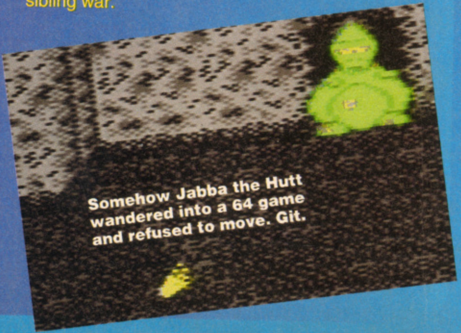
POKE 19305,142 POKE 20089,142 – Infinite lives

FUTURE KNIGHT

POKE 12783,173 – Infinite lives
POKE 13040,0 – Infinite energy

VENGEANCE

POKE 30083,234 – Infinite lives
POKE 30057,96 – No collisions
POKE 23017,234 POKE 23018,234 POKE 23019,234 – Infinite power
POKE yourbrotherinthe arm – a nasty little row which could easily escalate into full-blown sibling war.



Somehow Jabba the Hutt wandered into a 64 game and refused to move. Git.

BREAD, DOUGH, NOTES

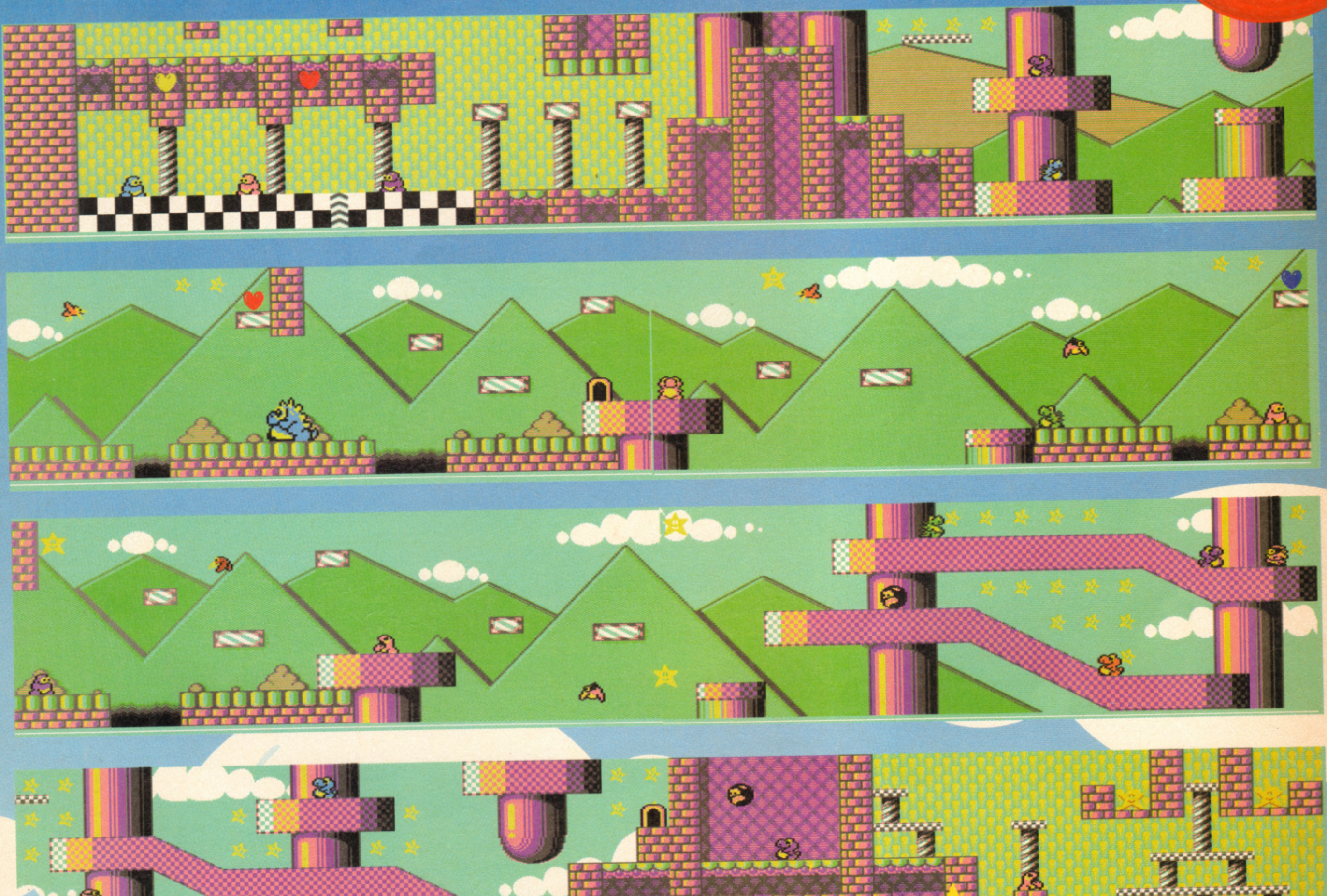
Cash, lolly, loot, readies and spondulix. Call it what you will, there's a £20 Software voucher up for the taking every month, and it's so easy to win one. If you have any tips, maps, solutions, Action Replay POKES, or general gameplaying advice, jot it down with your name and address and send the lot to: Andy Roberts' Gamebusters, Commodore Format, 30 Monmouth Street, Bath, Avon, BA1 2BW. Go on, live a little.

This friend of mine just won a Golf GTI in a competition. It was on the back of a tin and his kid brother told him the answers. Now that's cheating.

MAYHEM

HAPPY PIPE LAND

Gremlins attacked Mayhem's page last month, so after much tweaking, here's the happy portion of Pipeland...



PIPELAND STAGE 2

Time limit: 250
Dust quota: 11
Star quota: 231

CAST OF MONSTERS

Dino - Very similar to its earlier counterpart on Jellyland, but the Dinos in Pipeland have learned to run - now it's your turn to run and hide.

Flapodactyl - Much the same as its Jellyland counterpart – though these move faster than before. Be especially wary of groups of these beasts.

Blurp Jnr - As you migh expect, the bullets move a lot faster on this level, which doesn't help when Mayhem is caught in between two Blurps. Jump over the bullets onto their heads.

Megasaurus - A formidable beast, which is incredibly tricky to kill. Although it is easy enough to charge into the front of him, the lack of platforms makes matters steadily worse.

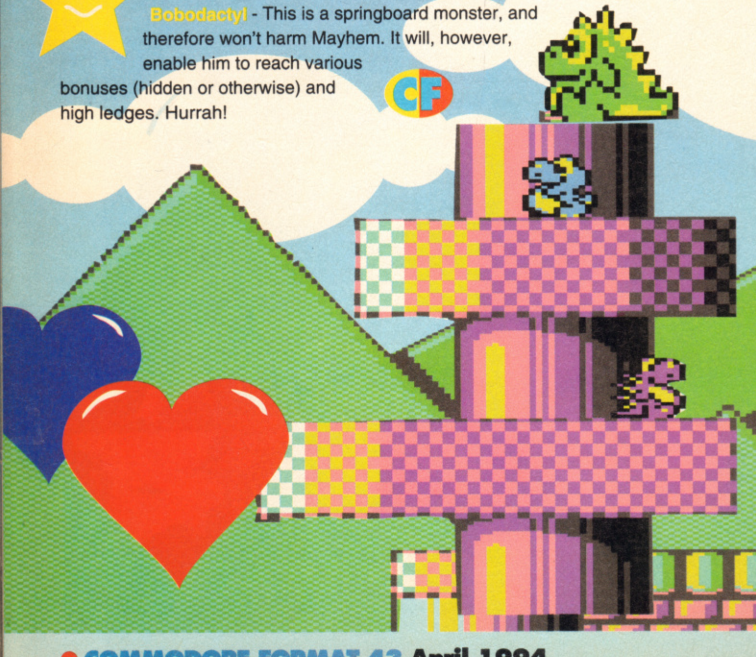
Cannonball - This weird 'dinosaur' is indestructable on the happy level, and comes in two forms. The first spits out miniature cannonballs, the second just gets in the way – sort of like a Sunday driver.

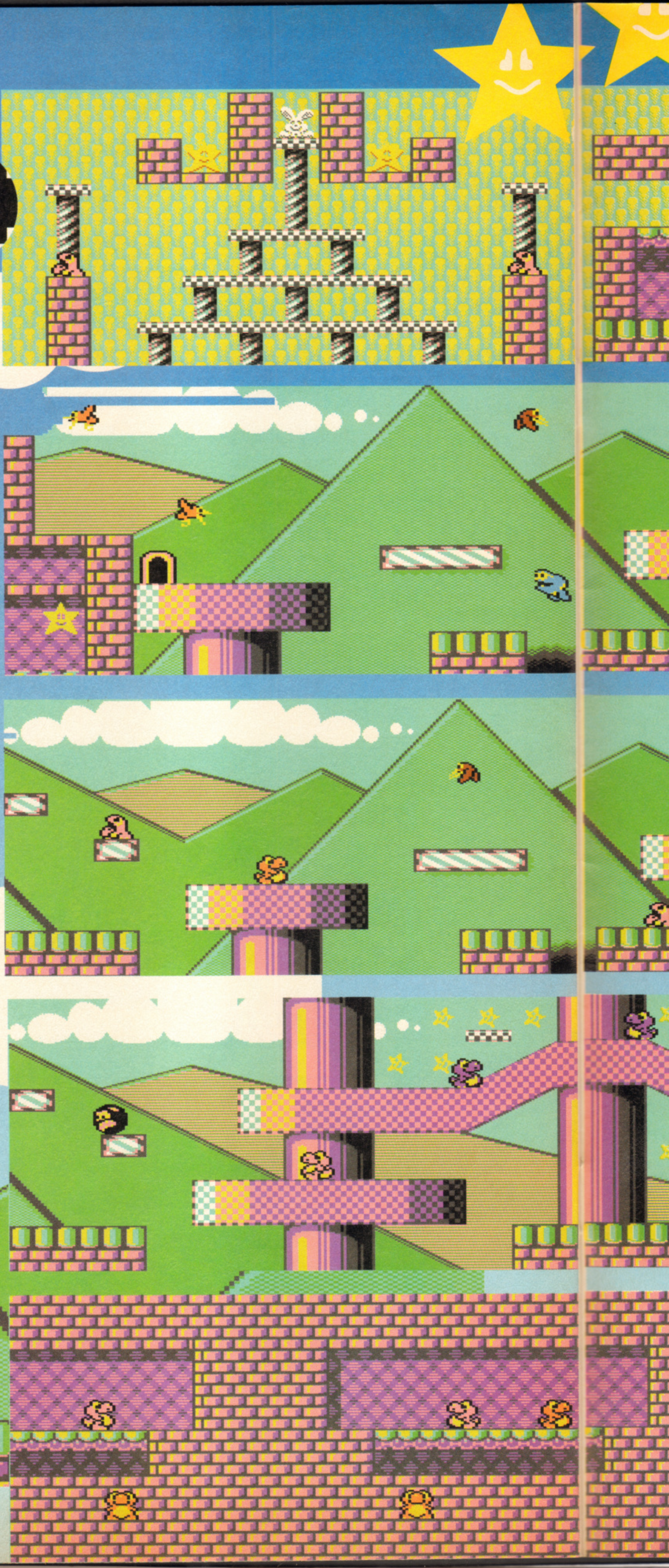
Spikey Dino - Similar to the Dino in most respects, apart from the fact that you can't charge into the back of him. Stick to jumping on his head and you'll be fine. Just don't aggravate him.

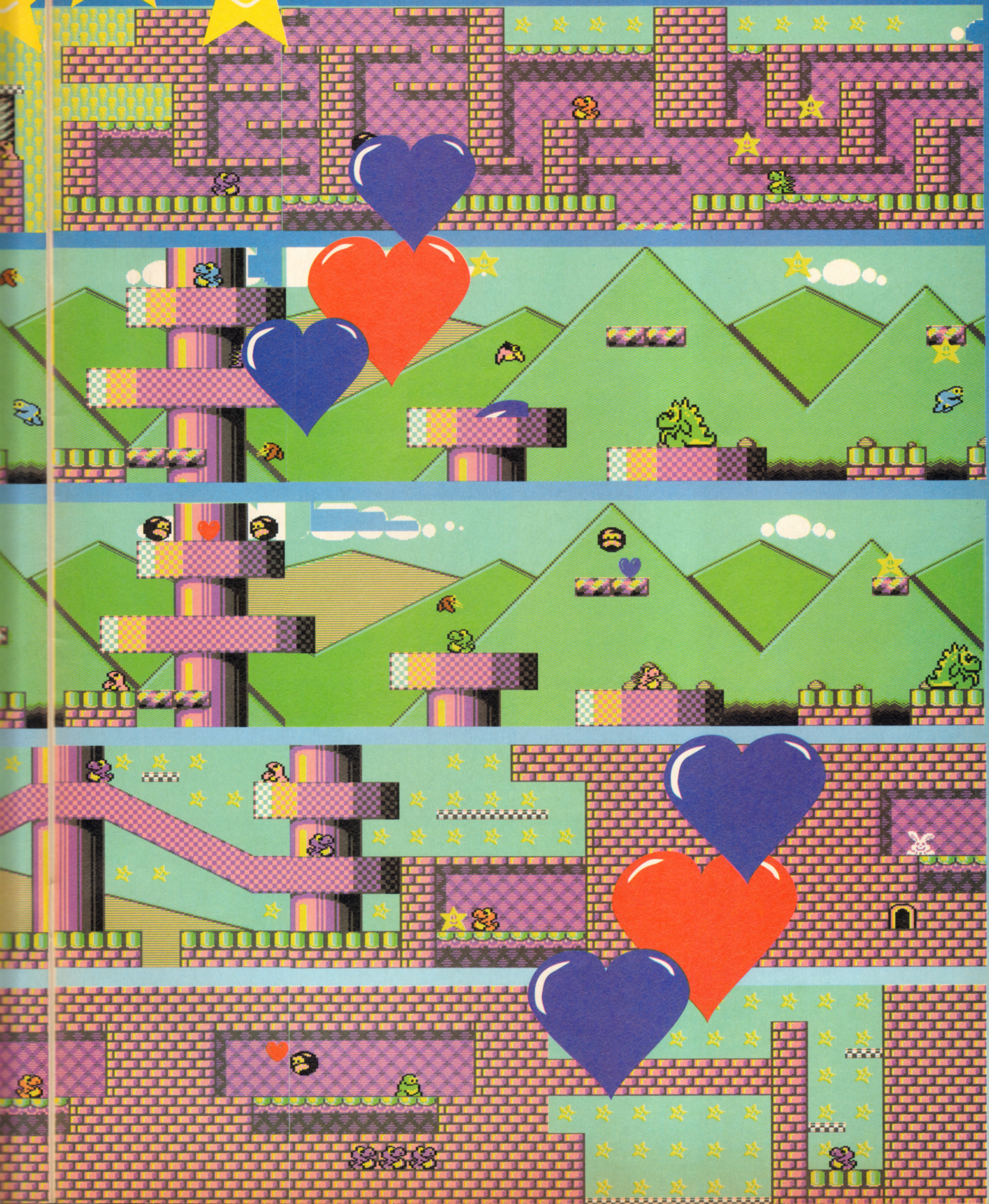
Bandit - If you're aiming to collect a Super Star Bonus, this is not the monster to collide with - he nicks your stars. Jump over him, take a diversion, leave the country, cancel your milk. Above all, avoid him.

Hopper - Quite an elusive monster, as it's often possible to chargeunderneath him while he's jumping. The best approach is to stop and jumpon his head (this too requires a modicum of skill).

Bobodactyl - This is a springboard monster, and therefore won't harm Mayhem. It will, however, enable him to reach various bonuses (hidden or otherwise) and high ledges. Hurrah! CF

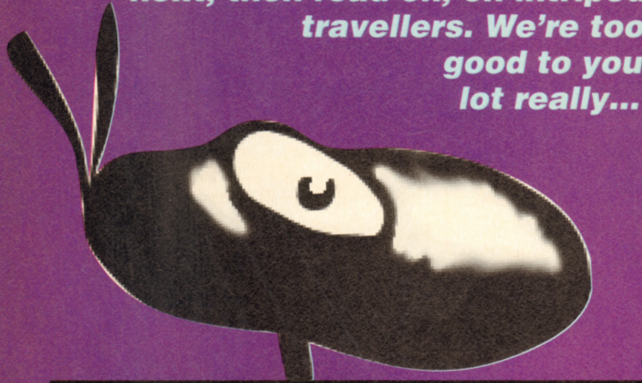


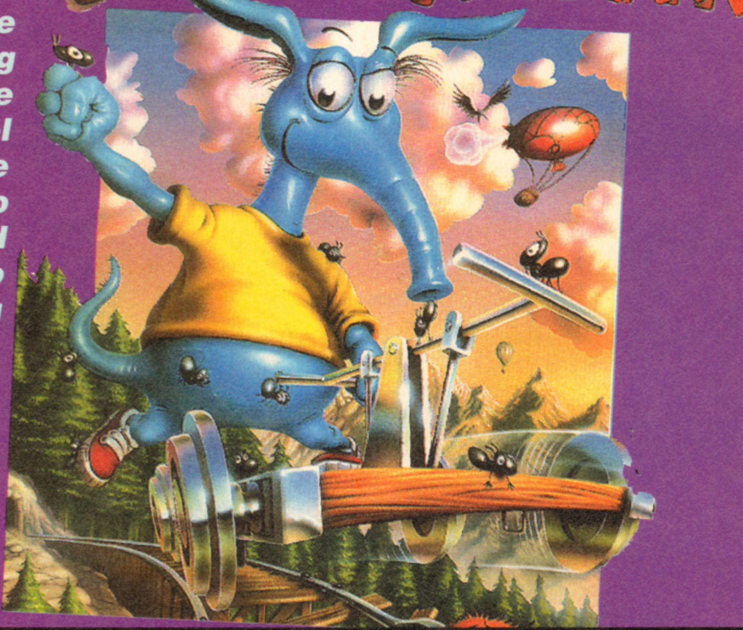


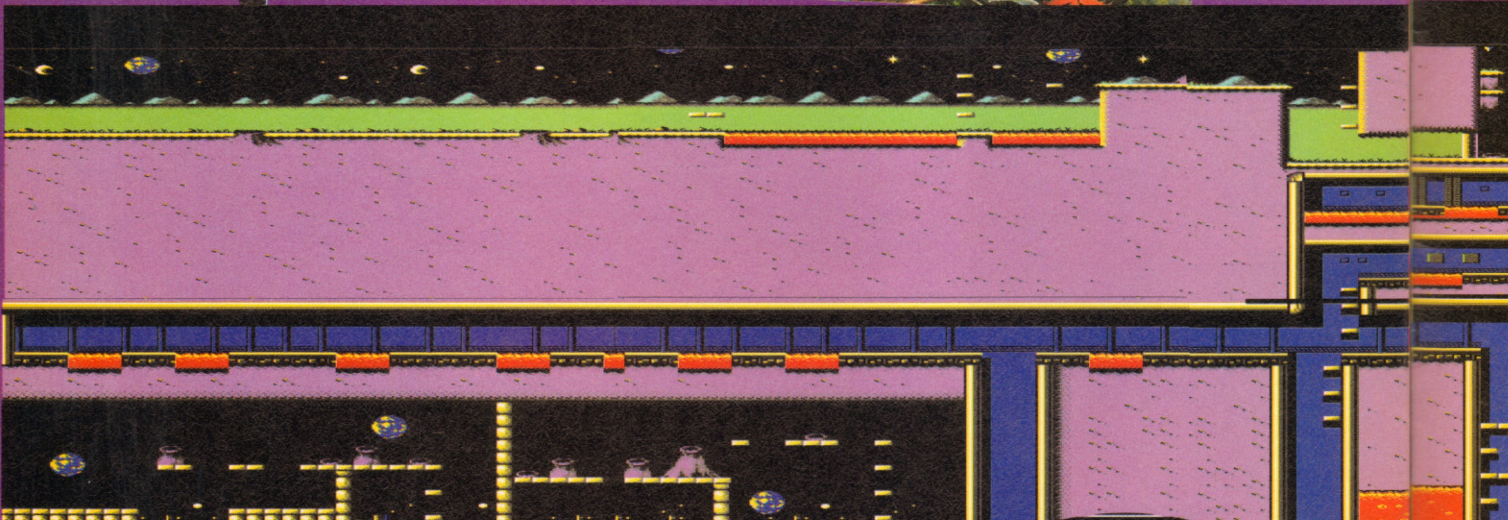


NOBBY the AARDVARK

Helmets at the ready for the fifth part of Andy Roberts' awesome player's guide about the amazing glove trotting aardvark. If you're stuck on that irritating fifth level and you're loosing sleep because you haven't got a clue where to go next, then read on, oh intriped travellers. We're too good to you lot really...

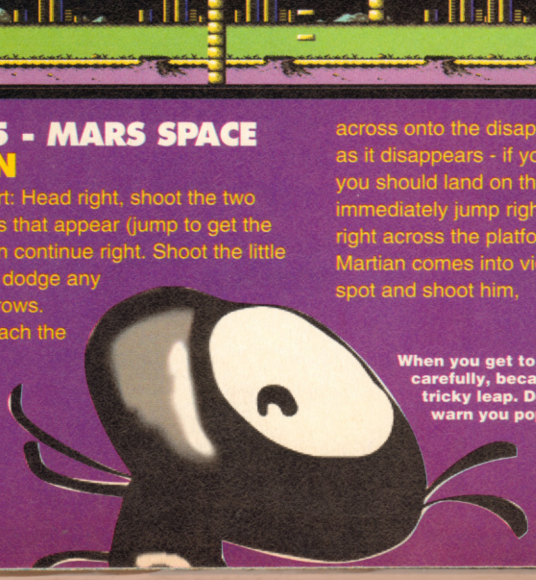


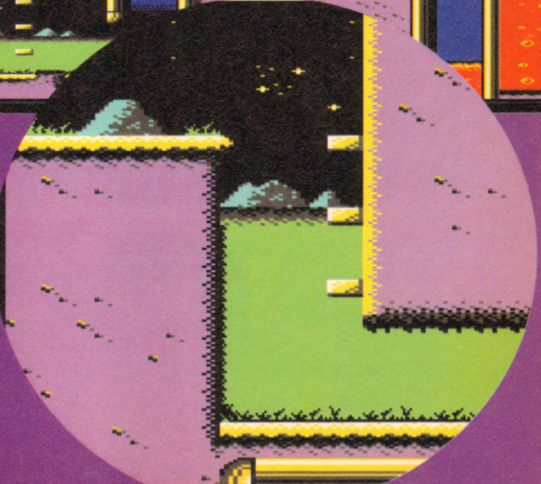




LEVEL 5 - MARS SPACE STATION

From the start: Head right, shoot the two flying saucers that appear (jump to get the top one), then continue right. Shoot the little bomber, and dodge any bombs he throws. When you reach the fire pit, jump up onto the platform, then jump across onto the disappearing platform just as it disappears - if you're timing is good, you should land on the platform, so immediately jump right again. Now jump right across the platforms until the green Martian comes into view. Stay on the spot and shoot him,





When you get to this section, jump carefully, because that top lip's a tricky leap. Don't say that we didn't warn you pop pickers.

STILL NOT TRUE

There was once a Warner Bros cartoon about an aardvark called Cyril. This particular character was fond of anything but ants. He'd often suck up entire campers hampers through his extended probosis, leaving nothing but crumbs.

Unfortunately, his cartoon never took off and he was consigned to a dusty vault after poor audience figures. Cyril was dusted off in the late seventies and placed in a new cartoon, but this did even worse than the original. He has now retired to Florida where he raises ants.

jumping any bullets he throws at you.

Jump across onto terra firma, run right and shoot the big blue baddie (again, jump any bullets), then go right and drop down. Kill the big blue baddie (if he's there), edge right and kill the first Martian, then continue to the right and kill the next martian in some cruel, meaningless way.

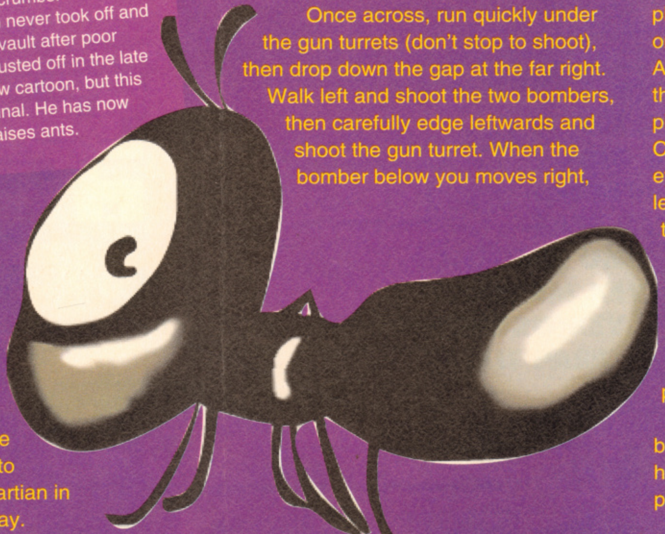
Jump up to the top and shoot the big blue baddie and the flying saucer, then carefully drop down and shoot the two green Martians. Now you're faced with another 'disappearing platform over a fire pit' dilemma, so deal with it in the same way as before.

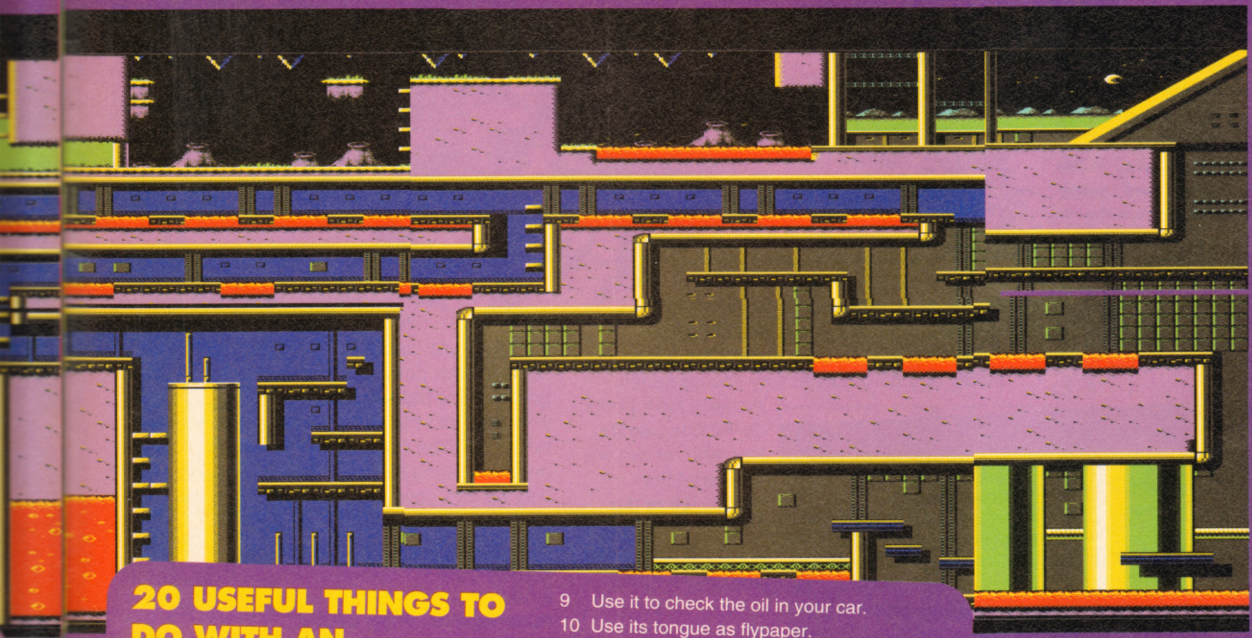
Once across, run quickly under the gun turrets (don't stop to shoot), then drop down the gap at the far right. Walk left and shoot the two bombers, then carefully edge leftwards and shoot the gun turret. When the bomber below you moves right, drop down and shoot it, then drop down again and head right. Don't be tempted to go left and drop down the pit - it's full of hot firey fire-type stuff.

Shoot the alien at the far right then drop down, holding left as you fall to land on the platform below. When safe to do so, drop onto the moving platform and ride leftwards. At the left, shoot the alien and flying saucer, then drop down and jump left across the fire pits (shoot the saucer that appears suddenly). Continue left, kill the bomber and the one-eyed alien, then jump up the platforms to your left. Shoot the flying saucer at the top (tricky), then jump right and go up on the moving platform. Get on the next moving platform and jump off at the left-hand side, then walk left and shoot the flying saucer. At the 'crossroads', don't bother going up - it merely leads to a pathetic pile of pointless platforms, so you'll be wasting your time.

Instead, go left and shoot the big blue baddie opposite, then drop down the gap and head left. Shoot the bomber, jump up the platforms, then kill the two green Martians which block the path. Edge left and shoot the other Martian, then drop down and kill the big blue baddie. Go left and jump up the platforms, kill the green Martian at the top, then drop left down the gap and quickly run left to collect the ACME crate and you'll finish the level.

Join us next month when we design our very own aardvark out of two loo rolls, piece of sticky backed plastic, and a washing up liquid bottle.





20 USEFUL THINGS TO DO WITH AN AARDVARK

1 Put it first in the dictionary.
2 Use it as a handy wall-mounted hand-held kitchen blender type thing.
3 Hoover up pine needles after Christmas.
4 Use it as a sleeping bag.
5 Hit people with it.
6 Skin it and hang its still-dripping head on your wall to offend animal rights people.
7 Wear the skin to parties where loads of greenies hang out.
8 Use it as an excuse to punch them all out.
9 Use it to check the oil in your car.
10 Use its tongue as flypaper.
11 A rucksack, pillow case, and just about any other cloth bag.
12 Donate it to a zoo where it can lead a proper, humane life, free from abuse and the harsh realities of urban Britain.
13 Wheel it round the streets, meekly saying 'Penny for the aardvark'.
14 Send them into the office, simply marking your parcel 'Aardvark'.
15 Commit marsupicide.
16 Collect the set.
17 Fill it full of ants, then aim the mouth at someone you don't like and squeeze the stomach.

NEXT MONTH

It's the positively perfect penultimate part of our complete Nobby solution, so join us in CF44 for a jaunt around the biggest maze in computer gaming history (probably). Meanwhile Simon will be cooking an apple turnover. Stay tuned.

FUTURE KNIGHT

Only three things in life are certain: death, taxes, and platform games, and Future Knight happens to be a whopping great platform game. So big in fact, we've had to slice our solution in two. Here's the first bit...

From the start: Go left, climb up the first ladder, up the ladder to your left, then continue leftwards over the acid pits and up the ladder. Now make your way to the right, jumping over the blocks, and collect the SAFE PASS at the end. Now go all the way to the left and climb down the leftmost ladder, then quickly down the next ladder to avoid the boss. Scarper into the exit. Walk all the way to the far left, jump over the exit, then head up the ladder. Go right at the top, then down the next ladder you find (you can nip into the weapons booth for a change of firepower if you wish).

Go right, up the ladder to the top, left and down the next ladder, then left again and – wait for it – up the ladder. Avoiding the boss, climb up the ladder to your right and dash headlong into the exit. The next section is pretty straightforward – simply make your way to the far left of the section until you reach the exit. Stay at the top of the screen and you should be able to bypass the majority of 'level bad things'. Once you're in the next section, head left along the bottom of the level and drop into the second 'pit' to swap the SAFE PASS with the CONFUSER UNIT. Love my pony.

SCORE
400
HIGH SCORE
50000
WEAPON SELECT
899

Don't look now, but Huckleberry Finn's here now!

Use the unit immediately to freeze the aliens, then make your way to the far left of the level again (the acid pits are very tricky to negociate, so think before you jump). Once you reach the exit, enter it. Head left over the acid pits and climb up the leftmost ladder, jump up to the ladder to the right, then climb up the next two ladders.

When you reach the moving platforms, jump carefully across, then jump right off the top one. Now make your way to the right of the level and head up to the exit – go in it.

In the next section, stay at the top of the screen and make your way to the far right of the level to collect the SECURO KEY. Once collected, go left up the 'steps' and go back the way you came into the exit. Now press SPACE to use the key, and an exit will appear at the bottom-left of the level... but don't go into it yet. Drop and climb down to the bottom of the level, then leave via the bottom-right exit. Head right to the pit were you left the SAFE PASS, collect it, then go back to the left (again, be careful over those acid pits) and into the exit.

Now go to the bottom-left of the level and into the exit which was created by the SECURO KEY. Use the SAFE PASS immediately (press SPACE), then go back into the exit you've just come through. Go right, then climb up the third ladder and collect the PLATFORM KEY to the right. Now go back through the bottom-left exit. Make your way down thorugh the level (use slopes wherever possible), then go through the exit at the bottom. As soon as you emerge, use the PLATFORM KEY immediately, then work your way down to the bottom of the level and collect the EXIT PASS. Return upwards and go through the exit, then work your way up again and nip into the exit at the top. Not forgetting your satchel.

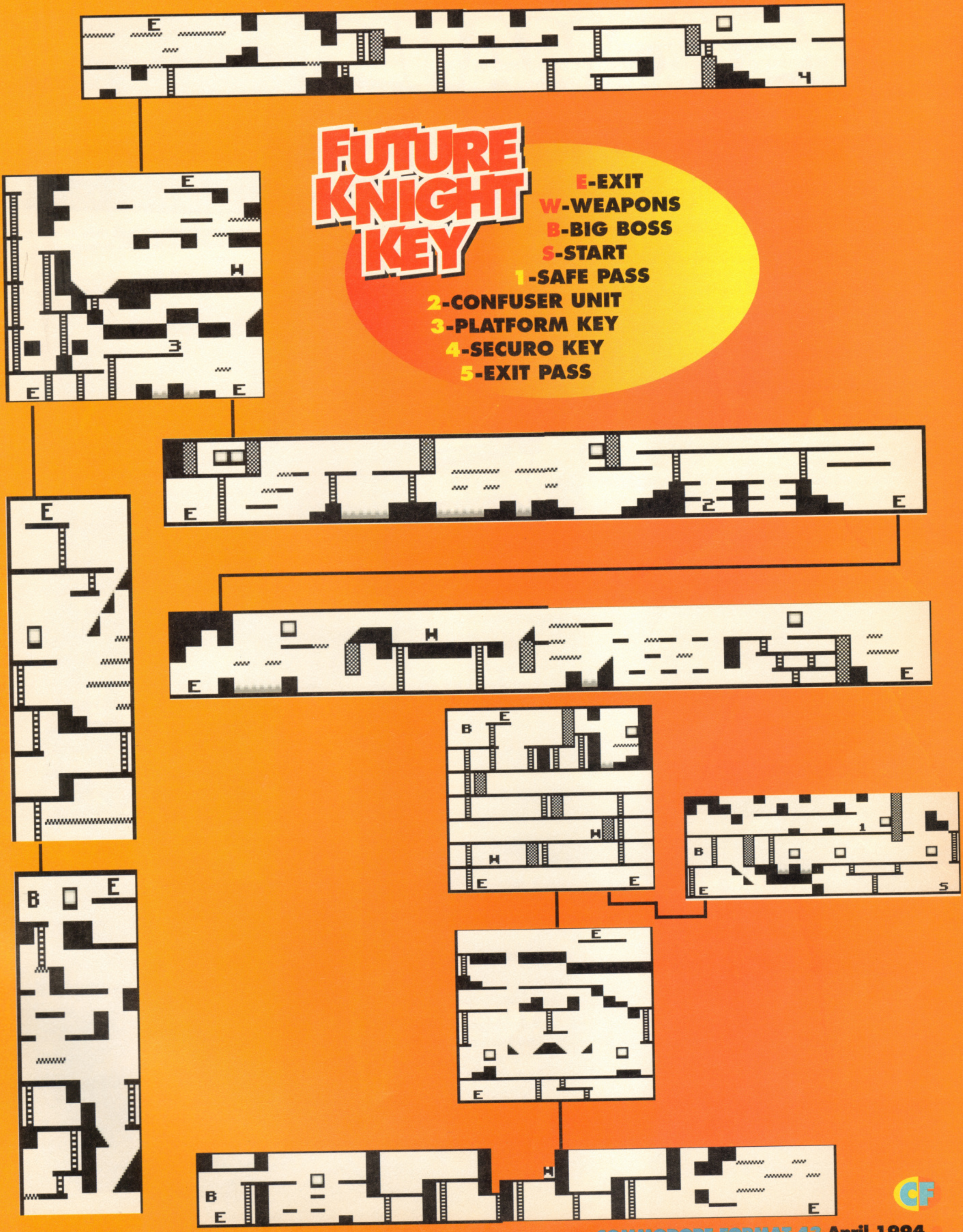
Make your way right and go through the bottom-right exit, then make your way to the far right of the next section (yep, the one with those deadly tricky acid pits). At the right go into the exit, then make your way right across the next section too – go in the exit at the end. You should now be at the top of section 2 (the second section of the game), so make your way down to the bottom-left of the level and go into the exit you jumped over earlier... remember that far back? *(Yeah, sure – Ed).*

Like a magic stead he rides across the road. Yippee.

When you appear in the next section, go left and drop down the gap. After quite a fall, go down the ladder to the right and make your way into the exit situated at the bottom-left of the level (look out for the worms). Now head left along the next section, making your way up and down the network of ladders, until you arrive at the far left. Don't worry about the big boss, there is no need to fight it. Simply prod SPACE to use the EXIT PASS, then quickly make for the exit which appears. Well done, you've completed the first half of the adventure. CF

NEXT MONTH

More derring-do's and valiant knight-type escapades in thirty days. Dare you cross the creepy forest? Have you the skill to negociate the castle? You have? Great, you can go first then.



FUTURE KNIGHT KEY

- E-EXIT
- W-WEAPONS
- B-BIG BOSS
- S-START
- 1-SAFE PASS
- 2-CONFUSER UNIT
- 3-PLATFORM KEY
- 4-SECURO KEY
- 5-EXIT PASS

LISTOMANIA POKERAMA

Pokes, widgets, cheats, edits, you want 'em, we've got 'em. Just about the best gamebusting section you can get...

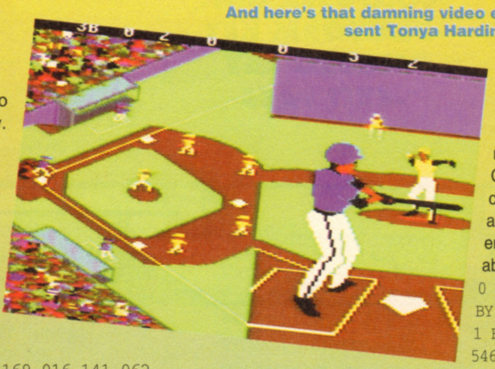
IAN RUSH
IN TEAM
STRENGTH
STAMINA
FORMATION
5-3-2
TEAM
RESERVE
INFO
FORMATION
EXIT
TEAM

What cheery looking chaps they all are. Can't name one of them though, unfortunately.

GRAND PRIX SIMULATOR

And. There. Goes. Mansell. It seems as though the other two cars on the track never qualify. How does the charismatic man do it? Could it be something to do with this listing POKE? Who knows.

```
0 REM GPS CHEAT BY WAZ
1 FOR X=512 TO 604:READ
Y:C=C+Y:POKE X,Y:NEXT
2 IF C<>9872 THEN
PRINT "DATA ERROR":END
3 POKE 157,128:SYS 512
10 DATA 032,044,247,056,169,016,141,062
11 DATA 003,169,017,141,064,003,032,108
12 DATA 245,169,032,141,068,017,169,057
13 DATA 141,069,017,169,002,141,070,017
14 DATA 162,255,189,193,016,157,193,002
15 DATA 202,208,247,162,033,189,159,016
16 DATA 157,159,002,202,208,247,076,120
17 DATA 003,072,206,032,208,032,069,002
18 DATA 104,044,013,220,096,169,032,141
19 DATA 013,059,169,085,141,014,059,169
20 DATA 002,141,015,059,096,224,000,208
21 DATA 003,254,189,051,096
```



And here's that damning video evidence which sent Tonya Harding to trial by grand jury.

JOHN LOWE'S DARTS

This amazing listing will help your game immensely. It won't improve your skills, but it will stop the computer opponent/player 2 from scoring (but only on game 1 – normal matchplay). Oh, and drinking copious amounts of alcohol in no way enhances your abilities... sadly.

```
0 REM DARTS CHEAT
BY M PUGH
1 FOR X=516 TO
546:READ
Y:C=C+Y:POKE X,Y:NEXT
2 IF C<>3221 THEN PRINT "DATA ERROR":END
3 POKE 157,128:SYS 516
4 DATA 032,086,245,169,019,141,207,003
5 DATA 206,208,003,096,072,077,080,169
6 DATA 002,141,113,009,076,230,003,169
7 DATA 173,141,205,035,076,027,008
```

LEAGUE CHALLENGE

Type in this splendid listing to start in the first division with a cool £900,000 to go with it. They think it's all over... it is now (to coin a phrase).

```
0 REM LEAGUE CHALLENGE CHEAT BY WAZ
1 FOR X=517 TO 573:READ Y:C=C+Y:POKE X,Y:NEXT
2 IF C<>5820 THEN PRINT "DATA ERROR":END
3 POKE 157,128:SYS517
10 DATA 169,018,141,040,003,169,002,141
11 DATA 041,003,032,086,245,169,029,141
12 DATA 178,002,169,002,141,179,002,096
13 DATA 169,032,141,222,003,169,048,141
14 DATA 223,003,169,002,141,224,003,032
15 DATA 069,003,096,169,057,141,251,060
16 DATA 169,049,141,087,066,206,032,208
17 DATA 096
```

DALEY'S SUPERTEST

Let's face it, old Daley has lost his magic touch when it comes to athletics, so why not try this listing to give the old fella a little boost. Think of it as 'binary Lucozade'.

```
0 REM SUPERTEST CHEAT BY WAZ
1 FOR X=400 TO 434:READ Y:C=C+Y:POKE X,Y:NEXT
2 IF C<>3936 THEN PRINT "DATA ERROR":END
3 POKE 157,128:SYS 400
4 DATA 032,086,245,169,032,141,120,003
5 DATA 169,165,141,121,003,169,001,141
6 DATA
122,003,076,167,002,072,169,173
7 DATA
141,083,138,206,032,208,104,173
8 DATA 013,220,096
```

Football Manager
3

'It's a game of two halves isn't it Terry?' 'Yes Nigel and the best team didn't win.'

POWER PACK

FUTURE KNIGHT

Here's a handy collection of DATA statements which, when combined with a C64, will reward you with infinite lives and power. Now you can play the game all through the 'knight' (Groan – Ed).

```
0 REM FUTURE KNIGHT CHEAT BY WAZ
1 FOR X=516 TO 556:READ Y:C=C+Y:POKE
X,Y:NEXT
2 IF C<>3767 THEN PRINT "DATA
ERROR":END
3 INPUT "INFINITE LIVES Y/N";A$:IF
A$="N" THEN POKE 545,206
4 INPUT "INFINITE POWER Y/N";B$:IF
B$="N" THEN POKE 550,1
5 POKE 157,128:SYS 516
10 DATA
032,086,245,169,019,141,207,003
11 DATA
206,208,003,096,087,065,090,169
12 DATA
032,141,013,010,169,002,141,014
13 DATA
010,076,230,003,169,173,141,042
14 DATA
056,169,000,141,041,057,076,027
15 DATA 008
```

VENGEANCE

Now you can claim vengeance on the God of C64 gaming frustration – simply type in this listing and RUN it for infinite lives, infinite power, and no collision detection whatsoever.

```
0 REM VENGEANCE CHEAT BY WAZ
1 FOR X=516 TO 567:READ Y:C=C+Y:POKE
X,Y:NEXT
2 IF C<>6030 THEN PRINT "DATA
ERROR":END
3 INPUT "INFINITE LIVES Y/N";A$:IF
A$="N" THEN POKE 545,202
4 INPUT "NO COLLISIONS
Y/N";B$:IF B$="N" THEN POKE 550,162
5 INPUT "INFINITE POWER Y/N";C$
6 IF C$="N" THEN FOR X=554 TO
564:POKE X,Y:NEXT
7 POKE 157,128:SYS 516
10 DATA
032,086,245,169,019,141,207,003
11 DATA
206,208,003,096,087,065,090,169
12 DATA
032,141,013,010,169,002,141,014
13 DATA
010,076,230,003,169,234,141,131
14 DATA
117,169,096,141,105,117,169,234
15 DATA
141,233,089,141,234,089,141,235
16 DATA 089,076,000,072
17 REMINDS ME OF PARIS IN THE WINTER
```

Why is it that toilets in other people's houses always flush ineffectively.

Hey you! (Who me?) Yes you! Check this out...

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- **Issues 1–4** , 6–9 and 12 of Zzap!64. Also issue June '86 of Computer and Video Games. Please call Fu Sang Li – 071 241 2730.
- **Instructions**, for Shadowfire. I was given the tape by a friend but the pillock didn't show me how to play it. Please write to Jason Pope, 7 Holland Street, Fairfield, Liverpool, L7 0JG.
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- **Pen Pal** wanted, any sex aged 14+. Want to exchange tips, games, stuff and have some form of contact with the outside world. Help! Write to Graeme Murgatroyd, 54 Cavan Drive, St Albans, Herts, AL3 6HP.
- **14 year old male** would like female pen pals. I enjoy computers and listening to all types of music. Give details of yourself. Write to Kevin Stocks, 23 Pendalar, Llanfairfechan, Gwynedd, LL33 ORA. *(Editors note – perhaps Kevin and Graeme should get in touch with Sophie. Just a thought, don't mean to interfere or anything – Hutch).*
- **Pen pal** wanted. Must have a C64. Boy or girl aged 10-13. Contact James, 19 Bryn Mor Road, Llanelli, Dyfed, SA15 2TF.
- **Got a 64?** Want a pen pal? then write to me if you are around 12 or 13 yards old and want to swap cheats, hints, etc. I like playing text adventures and RPGs. So write to me and tell me your interests. DAvid Farrell, Hollyhill, Gurtymadden, Loughrea, Co.Galway, Ireland.
- **Pen pal** wanted. Female or male, aged 13 to 14. I have loads of good games like Smash TV, Turrican II and loads more. Write to Peter Campbell, Lunniagh, Berry-beg, Letter Kenny, Co. Donegal, Ireland. *(And of course you're going to swap those games, not pirate them aren't you Peter! – Hutch).*
- **Pen pal** wanted. too swap games for our beloved C64 trade. Please write to Mike, 64 Bedford Road, Liverpool, Bootle, L20 7DW (with list!).
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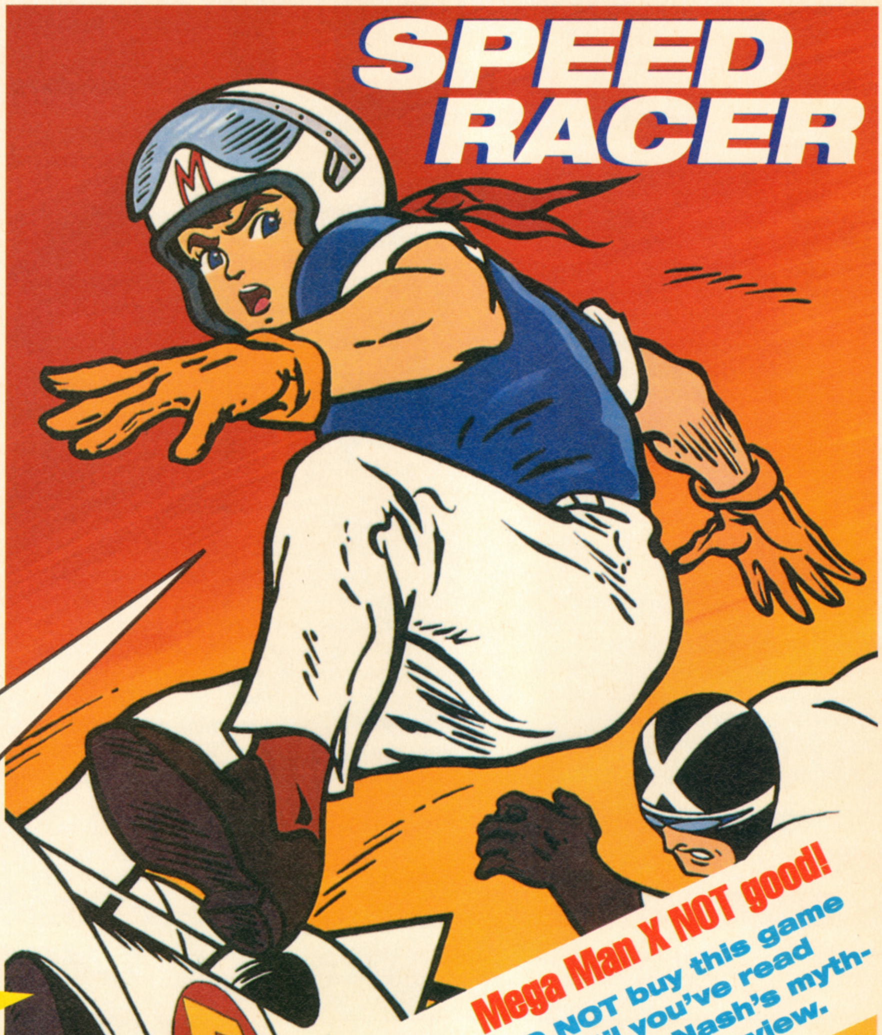
GAME ZONE

Maximum SNES GAMES Magazine

Racing around the track *Speed Racer* has one final chance... If only he can grab April's *Game Zone*. Only there would he find the secret story of how this cult cartoon kid came to the SNES. Only *Game Zone* 18 would enable the boy Racer to thwart the evil Racer X, Snake Oiler and Captain Terror.



"Gosh, I hope nobody gets hurt"

Tipped! The hardest games you'll ever play

Wolfenstein 3D, Flashback, Madden NFL 94 and Mega Lo Mania.

Mega Man X NOT good!

DO NOT buy this game until you've read Jonathan Nash's myth-busting review.

***Game Zone*, a magazine packed with verve, nerve, style and everything Super Nintendo**

Next issue on sale 10th March

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Issue Sixteen April 1994

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3DO
John Madden
Monster Manor

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- We talk to the programmers
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CHANNEL FOUR TELEVISION

Issue 16 on sale Thursday 24 March

OPEN TO QUESTION

This month we've decided to do something a bit different with the last page in the mag. So we've had a little chattette with John Rowlands and asked him some C64 related quezzies, along with some rather daft questions. Anyway, here's what John had to say for himself.

Name: John Rowlands
Favourite C64 game: Wizball
Most hated C64 game: Trolls (Flare)
Favourite arcade game: CyberSled (which is by Namco)
Who's the best 64 programmer ever? Andy Braybrook from a technical point of view, but in terms of gameplay it'd have to be the one and only Yak-lover – Jeff Minter.
Is Wizball a shoot-'em-up or a platform game? Shoot-'em-up
Which 64 game do you wish you'd written? A very big licence that made some programmer a lot of money.
Last game bought: Doom (PC)
Are consoles a fad? Yes, definitely.
Worst exam result: X in English Lit. for not turning up to the exam.
Ideal job: Writing games, but acutally being paid for it.
Favourite band: House of Pain (Steve reckons Abba).
Favourite song: *Jump Around* by the ace House of Pain.
Favourite ice cream flavour: Double Chocolate with Chocolate chip and choccy sauce with a Flake in the top.
Favourite car: Dodge Viper.
Is there life on earth: Just about.
What was your last dream about? Probably something to do with being chased by a man with a loofa.
Is there any hope for mankind? As long as they stop asking people to pay quite so much for console games.
Favourite home made meal: Spaghetti Bolognese – ittsa brill.
Best experience: Meeting my fiance. *(We'd like to point out that John said this after much cajoling from Steve! – Hutch).*
Worst experience: Getting up every morning or maybe the mastering of our fabby Creatures game.
Where's my red pen? God knows.
Who's on this page next month? Some fat bloke.

CF TOTALLY AMAZING SALE TYPE OFFER!

Forget that new Superman series, there are far more interesting things happening on your C64. *CF*43 will be on sale on the 15th March 1994, but you can get a special 'Mag-Save' option on this limited edition*. Just fill out this form and hand it to your newsagent and they'll stash a copy away for you. No more *Fugitive* for me then matey!. Hurrah!

Dear Mr/Mrs/Ms Newsie.
I'd like you to know that the new issue of Commodore Format (#43) arrives in this shop on the 15th of March and I'd really like you to put a copy aside for me. May I just say how nice the decoration is inside your shop, especially those cardboard price stars. Thank you very much.

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COMMODORE FORMAT

CF43
April 1994

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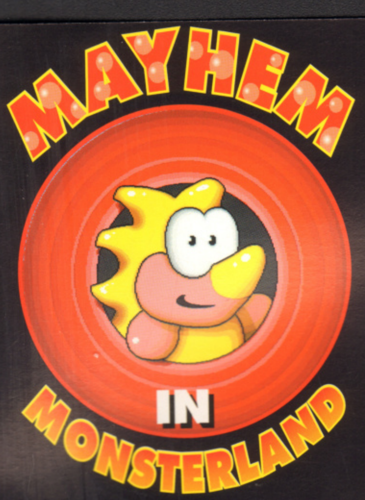
Hutch would like to thank: Catherine for the Wotsits and the Lemsip when the flu got a bit much.
Ollie would like to thank: Nutts for leaving and having a super-dooper bash at the St James Wine Vaults.
Simon would like to thank: Natasha because she keeps on bugging me for a mention in the magazine. Happy now?



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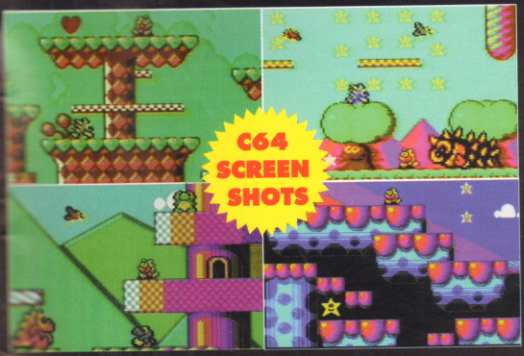

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